CRPL-F 27

IONOSPHERIC DATA

ISSUED
NOVEMBER, 1946

PREPARED BY CENTRAL RADIO PROPAGATION LABORATORY
National Bureau of Standards
Washington, D.C.

CRPL-F 2 7 CENTRAL RADIO PROPAGATION LABORATORY
NATIONAL BUREAU OF STANDARDS
WASHINGTON, D.C.
Issued
21 Nov. 1946

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CONTENTS

TERMINOLOGY AND SCALING PRACTICES

The symbols and terminology used in this report are those adopted by the International Radio Propagation Conference, and given in detail on pages 24 to 26 of the report IRPL-C61, "Report of International Radio Propagation Conference," and in the section on "Terminology," in reports IRPL-F1, 2, 3, 4, 5.

In the past, ionospheric conditions were summarized on a monthly basis by using average or mean values, for each hour of the day, for each month. However, following the recommendations of the International Radio Propagation Conference, held in Washington 17 April to 5 May 1944, beginning with data for 1 Jan. 1945, median values were used by IRPL wherever possible. Thus, median values are given for Washington, for all stations reporting directly to the CRPL, for the Canadian stations, and for all others sending in detailed tabulations to the CRPL, from which medians can be computed.

Where averages are reported, they are, at any hour, the average for all the days during the month for which numerical data existed.

The monthly median values used here are the values equaled or exceeded on half the days of the month at the given hour. The following conventions are used in determining the medians for hours when no measured values are given because of equipment limitations and ionospheric irregularities. Symbols used are those given in the report referred to above, IRPL-C61.

a. For all ionospheric characteristics:
Values missing because of A, B, C or F (see terminology referred to above) are omitted from the median count.

b. For critical frequencies and virtual heights:
Values missing because of E are counted as equal to or less than the lower limit of the recorder.
Values missing because of D are counted as equal to or greater than the upper limit of the recorder.
Values missing because of G are counted:
1. For $f^{o}F2$, as equal to or less than $f^{o}F1$.
2. For $h'F2$, as equal to or greater than the median.
Values missing for any other reason are omitted from the median count.

c. For muf factors (M-factors):
Values missing because of G are counted as equal to or less than the median.
Values missing for any other reason are omitted from the median count.

d. For sporadic E (Es):

Values of fEs missing because no Es reflections appeared, the equipment functioning normally otherwise, are counted as equal to or less than the median $f^{o}E$, or equal to or less than the lower frequency count of the recorder.

Values of fEs missing for any other reason, and values of hEs missing for any reason at all are omitted from the median count.

Beginning with data for November 1945, doubtful monthly median values for ionospheric observations at Washington, D.C., are indicated by parentheses, in accordance with the practice already in use for doubtful hourly values. The following are the conventions used to determine whether or not a median value is doubtful:

1. If only four values or less are available, no median value is computed, the data being considered insufficient.

2. For the F2 layer, if only five to nine values are available, the median is considered doubtful. The E and F1 layers are so regular in their characteristics that, as long as there are at least five values, the median is not considered as doubtful.

3. For all layers, if more than half of the values used to compute the median are doubtful (either doubtful or interpolated), the median is considered doubtful.

It is expected that this practice will be of assistance in evaluating the monthly median Washington data.

The same conventions are used by the CRPL in computing the medians from tabulations of daily and hourly data for stations other than Washington, beginning with the tables in IRPL-F18.

"Extent of E" is defined as follows: the highest value of $f^{o}E$. This is usually Es, but may include cases of normal E which were difficult to distinguish from Es, owing to the absence of a definite cusp.

MONTHLY AVERAGE AND MEDIAN VALUES OF WORLD-WIDE IONOSPHERIC DATA

The ionospheric data given here in Tables 1 to 63 and Figs. 1 to 125 were assembled by the Central Radio Propagation Laboratory for analysis and correlation, incidental to CRPL predictions of radio propagation conditions. The data are median values unless otherwise indicated. The following are the sources of the data:

Australian Council for Scientific and Industrial Research,
Radio Research Board:
- Brisbane, Australia
- Canberra, Australia
- Cape York, Australia
- Hobart, Tasmania
- Townsville, Australia

British Department of Scientific and Industrial Research,
Radio Research Board:
- Slough, England
- Burghead, Scotland
- Colombo, Ceylon
- Oslo, Norway
- Cairo, Egypt
- Falkland Is.
- Tromso, Norway

Canadian Radio Wave Propagation Committee:
- Churchill, Canada
- Ottawa, Canada
- St. John's, Newfoundland
- Prince Rupert, Canada
- Clyde, Baffin I.
- Swan River, Manitoba (Mobile unit)
- The Pas, Manitoba (Mobile unit)
- Gillam, Manitoba (Mobile unit)

New Zealand Radio Research Committee:
- Kermadec Is.
- Christchurch (Canterbury University College Observatory)
- Campbell I.
- Pitcairn I.
- Rarotonga I.

South African Council for Scientific and Industrial Research:
- Johannesburg, Union of S. Africa
- Capetown, Union of S. Africa

Scientific Research Institute of Terrestrial Magnetism, Moscow, U.S.S.R:
Bukhta Tikhaya, U.S.S.R.
Tomsk, U.S.S.R.
Sverdlovsk, U.S.S.R.
Moscow, U.S.S.R.
Leningrad, U.S.S.R.
Alma Ata, U.S.S.R.

Carnegie Institution of Washington (Department of Terrestrial Magnetism):
Huancayo, Peru
Watheroo, W. Australia

United States Army Signal Corps:
Leyte, Philippine Is.
Tokyo, Japan
Okinawa, I.

National Bureau of Standards (Central Radio Propagation Laboratory):
Washington, D. C.
San Francisco, California (Stanford University)
Baton Rouge, Louisiana (Louisiana State University)
San Juan, Puerto Rico (University of Puerto Rico)
Boston, Massachusetts (Harvard University)
Fairbanks, Alaska (University of Alaska, College, Alaska)
Wuchang, China (National Wuhan University)
Palmyra I.
Adak, Alaska
Guam I.
Maui, Hawaii
Trinidad, British West Indies

All India Radio (Government of India), New Delhi, India:
Bombay, India
Delhi, India
Madras, India
Peshawar, India

Radio Wave Research Laboratories, Central Broadcasting Administration:
Chungking, China
Peiping, China

Beginning with the CRPL-F26, publication of tables of so-called "provisional data," reported to the CRPL by telephone or telegraph will be discontinued. The reason for this change in policy is that users of the data hitherto published in this form receive it through established channels sooner than it reaches them in the F-series. Furthermore, having two sets of data, "provisional" and "final," for the same station for the same month leads to confusion.

It must be emphasized that there is to be no change in the methods used for rapid reporting and exchange of data. The change has to do only with the printing of provisional data in the F-series. Comments on this decision are invited.

The tables and graphs of ionospheric data are correct for the values reported to the CRPL, but, because of variations in practice in the interpretation of records and scaling and manner of reporting of values, may at times give an erroneous conception of typical ionospheric characteristics at the station. Some of these errors are due to:

a. Differences in scaling records where spread echoes are present.

b. Omission of values where $f^{o}F2$ is less than or equal to $f^{o}F1$, leading to erroneously high values of monthly average or median values.

c. Omission of values where critical frequencies are less than the lower frequency limit of the recorder, also leading to erroneously high values of monthly average or median values.

These effects were discussed on pages 6 and 7 of the previous F-series reports, IRPL-F1, 2, 3, 4, and 5.

The dashed-line prediction curves of the graphs of ionospheric data are obtained from the predicted zero-muf contour charts of the CRPL-D series publications. Predictions for individual stations used to construct the charts may be more accurate than the values read from the chart since some smoothing of the contours is necessary to allow for the longitude effect within a zone.

Discrepancies between predicted and observed values are often ascribable to these effects.

IONOSPHERIC DATA FOR EVERY DAY AND HOUR AT WASHINGTON, D. C.

The data given in Tables 64 to 75 follow the scaling practices given in the report IRPL-C61, "Report of International Radio Propagation Conference," pages 36 to 39, and the median values are determined by the conventions given above under "Terminology and Scaling Practices."

IONOSPHERE DISTURBANCES

Table 76 presents ionosphere character figures for Washington, D. C., during October 1946, as determined by the criteria presented in the report IRPL-R5, "Criteria for Ionospheric Storminess," together with American magnetic K-figures, which are usually covariant with them.

Table 77 lists for the stations whose locations are given the sudden ionosphere disturbances observed on the continuous field intensity recordings made at the Sterling Radio Propagation Laboratory during October 1946.

Table 78 lists for the stations whose locations are given the sudden ionosphere disturbances observed at the Brentwood and Somerton, England receiving stations of Cable and Wireless Ltd. from September 13 to October 5, 1946.

Table 79 gives provisional radio propagation quality figures for North Atlantic and North Pacific areas, for 01 to 12 and 13 to 24 GCT, September 1946, compared with the CRPL daily radio disturbance warnings, which are primarily for the North Atlantic paths, the CRPL weekly radio propagation forecasts of probable disturbed periods, and the half-day American geomagnetic K-figures.

The radio propagation quality figures for the North Atlantic are prepared from radio traffic and ionospheric data reported to the CRPL, in the manner described in detail in report IRPL-R31, "North Atlantic Radio Propagation Disturbances October 1942 through October 1945," issued 1 Feb. 1946.

The radio propagation quality figures for the North Pacific are prepared from radio traffic and ionospheric data reported to the CRPL, in a manner similar to that of IRPL-R31. The master scale of IRPL-R31 was used to formulate conversion scales for the North Pacific reports. Currently, beginning with CRPL-F23, issued July 1946, the North Pacific radio propagation quality figures reported are prepared from these revised conversion scales rather than, as hitherto, from the conversion scales of report IRPL-R13, "Ionospheric and Radio Propagation Disturbances, October 1943 through February 1945," issued 24 May 1945.

These radio propagation quality figures give a consensus of opinion of actual radio propagation conditions as reported by the half-day over the two general areas. It should be borne in mind, however, that though the quality may be disturbed according to the CRPL scale, the cause of the disturbance is not necessarily known. There are many variables that must be considered. In addition to ionospheric storminess itself as the

cause, conditions may be reported as disturbed because of seasonal characteristics, such as are particularly evident in the pronounced day and night contrast over North Pacific paths during the winter months, or because of improper frequency usage for the path and time of day in question. Insofar as possible, frequency usage is included in rating the reports. Where the actual frequency usage is not shown in the report to the CRPL, it has been assumed that the report is made on the use of optimum working frequencies for the path and time of day in question. Since there is a possibility that all of the disturbance shown by the quality figures is not due to ionospheric storminess alone, care should be taken in using the quality figures in research correlations with solar, auroral, geomagnetic or other data. Nevertheless, these quality figures do reflect a consensus of opinion of actual radio propagation conditions as found on any one half-day in either of the two general areas.

AMERICAN RELATIVE SUNSPOT NUMBERS

Table 80 presents the daily median values of relative sunspot numbers as reported by American observers for October 1946. The reports have been reduced, by appropriate constants, approximately to the Zurich scale of relative sunspot numbers. The monthly relative sunspot number is the mean of the daily median values listed in the table. This method was devised by Mr. A. H. Shapley while a member of the staff of the Department of Terrestrial Magnetism, Carnegie Institution of Washington. Details will be found in his article, "American Observations of Relative Sunspot Numbers in 1945 for Application to Ionospheric Prediction," Popular Astronomy, Vol. 54, No. 7, pp. 351-358, August 1946. The criteria for A observers have been modified slightly, beginning with September 1946. Rather than the mean deviation for the four monthly constants being held within a value of 0.16 of the four-month mean, the mean deviation must be held within 15% of that observer's constant of the four-month mean. In addition, sunspot numbers must be reported for at least one-half of the month during three-fourths of the year. This will tend to restrict the observers to those whose observations are consistent from month to month without rejecting the work of observers for whom weather conditions are unsatisfactory for observations during some months of the year.

ERRATA

1. IRPL-F19, Table 60; F21, Tables 53 and 63; F24, Tables 68 and 73:

   Data for Peshawar and Madras, India were observed at 2230 instead of 2300.

2. Virtual heights from Prince Rupert Ionospheric Station (Canada) have been in error from October 1945 through August 1946. For this period 25 km should be added to all virtual heights.

3. IRPL-F5, Tables 40, 43; F9, Table 33; F20, Tables 71, 74, 78; CRPL-F23, Tables 54, 56; F25, Tables 58, 61, 63; F26, Tables 22, 27:

   Column headed "h'F2" should be headed "h max F2 (height at 0.83 $f^{o}F2$)," not "h'F2." (Data from Slough, England).

Table 1

Washington, D.C. (39.0°N, 77.5°W) October 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	280	5.4					2.3	2.8
01	270	5.4					1.9	2.8
02	270	5.3					2.2	2.8
03	270	4.8					2.2	2.8
04	260	4.4					2.3	2.8
05	260	3.8					2.3	2.8
06	250	4.6					2.7	2.9
07	230	7.1			110	2.0	2.8	3.2
08	230	(9.0)	220		110	2.7	2.9	3.2
09	240	(10.0)	220		110	(3.0)	2.9	3.1
10	250	10.4	220		100	(3.3)	3.8	3.0
11	260	11.4	210	(5.0)	100	3.4	3.7	3.0
12	260	11.5	220	(5.0)	100	3.5		2.9
13	260	11.5	220	4.9	105	(3.5)	3.7	(3.0)
14	260	11.4	220		100	(3.2)	3.6	2.9
15	250	(11.3)	230		110	2.9	3.7	(2.9)
16	240	(11.0)	230		110	2.5	2.8	(3.0)
17	230	(10.2)			110	1.8	2.4	(3.0)
18	230	(8.9)					2.4	
19	230	(7.7)					2.7	(3.0)
20	240	(7.0)					2.2	(2.9)
21	250	(6.4)					2.3	(2.9)
22	260	(6.0)					2.2	(2.8)
23	270	(5.7)					2.3	(2.8)

Time: 75.0°W.
Sweep: 0.75 Mc to 11.5 Mc in 3.4 minutes; after October 28, 1946, 0.75 Mc to 16.0 Mc in 3.8 minutes.

Table 2

Fairbanks, Alaska (64.9°N, 147.8°W) September 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	352	4.2					5.5	2.5
01	346	3.4					5.3	2.7
02	345	4.0					5.5	2.6
03	346	3.0					5.2	2.6
04	335	3.8					5.5	2.6
05	318	4.3				1.8	5.5	2.7
06	300	4.6		3.3		2.1	4.6	2.8
07	265	5.0	250	3.7		2.5	3.2	2.7
08	366	5.2	235	4.0		2.8	3.1	2.6
09	390	5.4	240	4.3		3.0	3.1	2.7
10	375	5.7	240	4.5		3.0	3.0	2.7
11	370	5.8	240	4.6		3.1	3.0	2.7
12	345	6.4	240	4.5		3.1	2.9	2.8
13	328	6.6	240	4.4		3.0	3.0	2.8
14	280	6.6	250	4.3		3.0	2.9	2.8
15	250	6.9		4.0		2.8	2.9	2.8
16	255	6.8				2.5	2.9	2.9
17	260	6.2				2.2	2.8	2.9
18	260	6.2				1.8	3.0	2.9
19	260	5.6				1.6	3.0	2.9
20	260	4.8				1.1	3.3	2.8
21	295	3.8					3.4	2.7
22	300	4.0					4.8	2.6
23	352	4.2					5.8	2.6

Time: 150.0°W.
Sweep: 16.0 Mc to 0.5 Mc in fifteen minutes.

Table 3

Churchill, Canada (58.8°N, 94.2°W) September 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	310	4.5					6.1	2.8
01	(320)	3.8					6.1	
02	310	3.4					3.6	2.6
03	(310)	4.2					3.4	2.8
04	340	3.6				2.6	3.1	2.7
05	330	4.1				2.5	3.6	2.8
06	300	4.6			120	2.9	3.0	3.0
07	300	5.3		3.7	130	3.0	2.6	3.0
08	325	5.5	240	4.2	120	3.2		3.0
09	360	5.6	240	4.4	120	3.2		2.8
10	370	5.9	230	4.5	120	3.2		2.8
11	390	6.3	230	4.6	130	3.3		2.7
12	385	6.5	240	4.7	130	3.3		2.7
13	370	6.6	240	4.7	120	3.3		2.7
14	350	6.6	230	4.5	120	3.2		2.8
15	355	6.7	240	4.5	130	3.2		2.8
16	330	6.5	250	4.2	130	2.9		2.8
17	330	6.4	270	3.8	130	2.9		2.9
18	315	5.8			120	2.8		2.9
19	290	5.5			130	3.2		2.9
20	310	5.1			125	3.1	3.9	2.8
21	295	4.8			130	2.3	3.8	2.8
22	310	4.4					4.8	2.8
23	290	4.4					6.0	2.8

Time: 90.0°W.
Sweep: 2.0 Mc to 16.0 Mc in one minute.

Table 4

Adak, Alaska (51.9°N, 176.6°W) September 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	315	3.8						2.7
01								
02								
03								
04								
05								
06	275	5.0	250		110	2.3	2.3	3.0
07	265	5.6	235		105	2.6		3.1
08	260	6.8	225		110	3.0	2.7	3.2
09	270	7.3	212		105	3.4	3.4	3.3
10	265	7.4	215	4.7	105	3.4		3.2
11								
12	280	7.8	205	(5.0)	105	3.5	4.0	3.2
13	265	7.9	215	4.8	105	3.4	3.1	3.2
14	268	8.3	218		110	3.3	3.1	3.2
15								
16								
17								
18	225	7.1					2.2	3.2
19	230	6.4					2.0	3.2
20	255	5.6						3.1
21	255	5.0						3.0
22	288	4.2						2.8
23	315	4.0						2.8

Time: 180.0°W.
Sweep: Manual operation.

Table 5

St. John's, Newfoundland (47.6°N, 52.7°W) September 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	(260)	(5.7)					2.6	(3.2)
01	(250)	(5.5)					2.7	(3.3)
02	(250)	(5.2)					3.0	(3.3)
03	(250)	(4.9)					2.8	(3.3)
04							2.5	3.3
05	(230)	(4.5)						(3.4)
06	235	4.5					2.5	3.6
07	230	5.3	190	3.3	100	2.5	2.5	3.6
08	240	5.9	190	4.0	90	2.9	2.7	3.5
09	270	6.1	190	4.4	90	3.1		3.4
10	270	6.4	190	4.7	90	3.2	3.2	3.5
11	280	6.9	180	4.9	90	3.4	3.5	3.3
12	290	7.2	180	5.0	90	3.5	3.6	3.3
13	260	7.0	180	5.0	90	3.5		3.4
14	260	7.1	190	4.9	90	3.3		3.4
15	260	7.4	190	4.7	90	3.2	2.5	3.4
16	260	7.3	190	4.4	90	3.0		3.5
17	250	7.5	200	3.9	90	2.6	2.4	3.5
18	230	7.6	200	3.8	100	2.4	2.1	3.5
19	210	7.8					2.4	3.5
20	200	7.0					2.4	3.5
21	210	6.5					2.7	3.4
22	(220)	(6.2)					2.3	(3.3)
23	(240)	(6.0)					2.5	(3.2)

Time: 52.5°W.
Sweep: Manual operation.

Table 6

Ottawa, Canada (45.5°N, 75.8°W) September 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	295	4.4						2.9
01	310	3.5						2.9
02	330	3.4						2.9
03	325	3.2						3.0
04	320	2.9						3.0
05	315	3.2						3.0
06	255	4.5						3.1
07	240	6.0			130	2.5		3.0
08	260	6.2	220	4.0	110	2.8		3.0
09	285	6.7	210	4.6	110	3.1		2.9
10	310	7.4	200	4.9	110	3.4		2.8
11	310	7.6	200	5.0	110	3.6		2.8
12	330	7.8	200	5.0	110	3.6		2.8
13	320	8.2	210	5.0	110	3.5		2.8
14	300	8.4	210	4.9	110	3.4		2.7
15	290	8.4	215	4.7	110	3.3		2.8
16	280	8.3	220	4.5	110	3.1		2.8
17	260	8.4	230	3.9	120	2.7		2.8
18	240	7.9			140	2.5		2.8
19	240	7.4						2.8
20	240	7.2						2.8
21	260	6.1						2.8
22	270	5.4						2.9
23	290	4.7						3.0

Time: 75.0°W.
Sweep: 1.93 Mc to 13.5 Mc. Manual operation.

Table 7

Boston, Massachusetts (42.4°N, 71.2°W) September 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	300	5.0						2.6
01	298	4.7						2.6
02	300	4.3						2.6
03	290	3.9						2.6
04	300	3.6						2.6
05	300	3.3						2.6
06	300	3.5						2.7
07	275	5.4			135	2.4		2.9
08	300	6.4			135	2.8		2.9
09	300	7.0			135	3.0		2.9
10	300	7.1	250	4.9				2.8
11	330	7.2						2.9
12	345	7.5						2.9
13	325	7.5						2.8
14	350	7.6						2.9
15	330	7.5						2.9
16	300	8.0			130	3.2		2.7
17	300	8.0			135	3.0		2.8
18	275	8.0			140	2.7		2.8
19	268	8.0						2.8
20	260	7.6						2.7
21	272	7.0						2.6
22	280	6.2						2.6
23	295	5.6						2.6

Time: 75.0°W.
Sweep: 0.85 Mc to 13.75 Mc in one minute.

Table 8

San Francisco, California (37.4°N, 122.2°W) September 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	320	4.1						2.6
01	325	4.0						2.6
02	320	4.2						2.5
03	300	4.2						2.6
04	300	4.2						2.6
05	280	4.1						2.6
06	260	5.6						2.9
07	260	7.2	240	4.2	120	2.6		3.0
08	280	8.0	240	4.6	120	3.1		3.0
09	280	8.5	220	4.9	120	3.4		2.9
10	300	8.8	220	5.0	120	3.7		2.8
11	310	9.2	220	5.2	120	3.8		2.8
12	300	9.4	220	5.3	120	3.8		2.8
13	300	10.0	220	5.1	120	3.8		2.8
14	300	10.0	230	5.0	120	3.7		2.8
15	280	9.4	240	4.9	120	3.5		2.9
16	280	9.3	240	4.4	120	3.1	3.4	2.9
17	250	9.0	235	3.8	120	2.6	3.2	3.0
18	240	8.5					2.6	3.0
19	240	7.7					2.5	2.9
20	240	6.4						2.8
21	260	5.2					2.6	2.8
22	270	4.6						2.7
23	300	4.3						2.6

Time: 120.0°W.
Sweep: 0.8 Mc to 12.0 Mc in six minutes.

Table 9

Baton Rouge, Louisiana (30.5°N, 91.2°W) September 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	300	4.9						2.9
01	300	4.8						2.9
02	300	4.8						3.0
03	300	4.7						3.0
04	310	4.6						2.9
05	290	4.5						2.9
06	270	5.9						3.1
07	260	7.5	250	3.7	130	2.5		3.2
08	260	8.4	250	4.2	120	2.9		3.2
09	270	8.4	240	4.5	120	3.3		3.1
10	295	9.2	240	4.8	120	3.5		3.0
11	300	9.5	225	5.0	120	3.6		3.0
12	300	9.6	220	5.1	120	3.7		3.1
13	300	9.6	230	5.1	120	3.7		3.1
14	295	9.6	240	5.0	120	3.6		3.1
15	290	9.6	240	4.8	120	3.5		3.1
16	270	9.5	240	4.3	120	3.0		3.1
17	255	9.5	250	3.7	120	2.6		3.2
18	250	9.2			130	(2.2)	3.0	3.2
19	240	7.2					2.4	3.2
20	250	6.0					2.8	3.0
21	260	5.6						3.0
22	270	5.4						2.9
23	285	5.1						3.0

Time: 90.0°W.
Sweep: 1.0 Mc to 9.5 Mc in three minutes, thirty seconds.

Table 10

Maui, Hawaii (20.8°N, 156.5°W) September 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	fOE	fEs	F2-M3000
00	300	7.7						2.8
01	255	7.5						3.1
02	255	6.7						3.0
03	280	4.2						2.8
04	350	4.0						2.7
05	350	3.8						2.8
06	280	5.6						2.9
07	300	8.2		3.0				3.0
08	300	9.0	250	4.8				2.8
09	310	9.8	250	5.0				2.6
10	350	11.0	250	5.2				2.6
11	360	12.2	250	5.4				2.6
12	375	12.5	250	5.4				2.8
13	360	12.6	250	5.6				2.8
14	350	12.8	250	5.4				2.9
15	350	12.6	250	5.0				2.9
16	300	12.8	250	4.6				3.0
17	300	12.2		2.6				2.9
18	250	11.6						2.9
19	270	10.0						2.9
20	300	9.9						2.9
21	300	8.8						2.8
22	310	7.9						2.7
23	350	7.5						2.6

Time: 150.0°W.
Sweep: 2.2 Mc to 16.0 Mc in one minute.

Table 11

San Juan, Puerto Rico (18.4°N, 66.1°W) September 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	fOE	fEs	F2-M3000
00		6.5						2.8
01		6.1						2.8
02		5.8						2.9
03		5.2						2.9
04		4.8						2.8
05		4.7						2.8
06		5.4						2.9
07	260	7.6						3.2
08	260	8.2				3.0		3.0
09	300	10.0	225	4.2		3.2		3.0
10	330	9.9	230	4.9		3.5		2.8
11	340	10.7	230	5.0		3.7		2.8
12	345	11.2	230	5.1		3.7		2.8
13	340	11.4	230	5.2		3.8		2.8
14	340	11.4	235	5.0		3.7		2.8
15	320	11.2	240	4.8		3.5		2.8
16	300	10.8	230	4.2		3.2		2.8
17	290	9.7					4.0	2.9
18	280	9.4						3.0
19	285	8.2						3.0
20		6.6						2.9
21		6.4						2.9
22		6.0						2.8
23		6.3						2.8

Time: 60.0°W.
Sweep: 2.8 Mc to 14.0 Mc in eight minutes.

Table 12

Guam I. (13.5°N, 144.8°E) September 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	fOE	fEs	F2-M3000
00	(250)				100		2.4	
01	240	(12.2)			100		3.1	
02	(220)				100		3.6	
03	(230)						3.0	
04	(220)						2.8	
05	(240)	(5.5)			100		3.8	
06	(255)	(4.7)			100		4.4	3.0
07	(240)	(8.0)			100		4.6	3.2
08								
09								
10								
11	(320)	(11.4)	210	5.8	100		5.8	2.4
12	(330)	(11.5)		6.0	95		6.2	2.5
13	(330)	(11.8)		5.8	110		5.9	2.5
14								
15								
16								
17	268	(12.4)			100		7.0	2.8
18	(270)				120		4.9	
19	(300)						3.2	
20								
21								
22								
23	(250)				100		3.3	

Time: 150.0°E.
Sweep: Manual operation.

Table 13

Trinidad, Brit. West Indies (10.6°N, 61.2°W) September 1946

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00	260	8.5						3.1
01	230	7.7						3.3
02	240	6.3						3.1
03	260	5.8						3.0
04	250	5.3						3.0
05	260	5.2						3.1
06	260	6.2					2.4	3.1
07	230	8.4			120	2.6	3.0	3.4
08	245	9.2	220	4.8	110	3.2	3.8	3.2
09	260	10.8	220	5.2	110	3.6	4.0	3.0
10	290	12.0	220	5.5	110	3.8	4.5	2.9
11	300	12.8	220	5.7	110	4.0	4.6	2.9
12	300	14.0	220	5.6	110	4.2	4.8	2.8
13	290	14.5	220	5.4	115	4.0	4.9	2.9
14	300	14.0	220	5.4	110	4.0	5.0	2.9
15	280	13.2	220	5.4	110	3.7	5.1	2.9
16	270	12.0	230	4.7	110	3.2	4.8	2.9
17	250	11.9			110	2.7	4.6	2.9
18	250	11.9					4.0	3.0
19	250	11.2					4.2	3.0
20	250	10.0					3.4	3.0
21	240	9.2					2.4	2.9
22	260	9.0						2.8
23	280	8.8						3.0

Time: 60.0°W.
Sweep: Manual operation.

Table 14

Johannesburg, Union of S. Africa (26.2°S, 28.0°E) September 1946

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00		4.0						2.9
01		4.0						2.9
02		3.9						3.0
03		3.5						2.9
04		3.4						2.9
05		3.2						3.0
06	250	4.8					2.2	3.2
07	230	7.8			100	2.5		3.4
08	230	8.8	220		100	3.0		3.3
09	250	9.6	220	4.6	100	3.4		3.2
10	260	10.4	200		100	3.6		3.1
11	270	10.8	200	(5.0)	100	3.7		3.0
12	280	11.2	200	5.0	100	(3.8)		3.0
13	280	11.0	200	5.0	100	(3.7)		3.0
14	270	11.0	200	4.8	100	3.6		2.9
15	250	10.8	210	4.0	100	3.5		2.9
16	250	10.5	220		100	3.1	3.6	2.9
17	230	10.3			100	2.5	3.0	3.0
18	230	9.9					2.3	3.1
19	220	8.8					2.3	3.1
20	220	7.4						3.2
21	230	5.8						3.2
22	240	4.8						3.2
23	260	4.3						3.0

Time: 30.0°E.
Sweep: 2.0 Mc to 15.0 Mc in eight seconds.

Table 15

Christchurch, N. Z. (43.5°S, 172.6°E) September 1946

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00	270	5.8					2.3	2.8
01	260	5.0					2.6	2.8
02	260	4.6					2.2	2.7
03	260	4.2					1.6	2.8
04	260	3.6					2.4	2.9
05	270	2.7					2.2	2.8
06	260	3.5				1.5	2.5	3.0
07	240	5.5				2.1	2.9	3.2
08	240	6.8	230	4.0		2.8		3.4
09	260	7.7	225	4.5		3.1		3.2
10	270	8.5	220	4.8		3.4		3.1
11	270	8.8	220	4.8		3.5	4.2	3.1
12	270	8.9	220	5.0		3.5	4.2	3.0
13	260	8.3	220	4.9		3.5		3.0
14	270	8.8	220	4.7		3.4		3.0
15	260	8.7	225	4.4		3.1		3.0
16	250	8.4	240	4.0		2.8		2.9
17	240	8.0				2.2		3.0
18	240	7.6				1.5	2.5	3.0
19	240	7.3					2.0	2.7
20	260	6.7						2.7
21	280	6.6					1.7	2.6
22	280	6.2						2.7
23	270	6.0					2.3	2.7

Time: 172.5°E.
Sweep: 1.0 Mc to 13.0 Mc.

Table 16 (Supersedes Table 11, CRPL-F25)

Maui, Hawaii (20.8°N, 156.5°W) August 1946

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00	300	8.4						2.9
01	270	8.2						3.0
02	250	8.2						3.1
03	250	6.7						3.1
04	250	5.8						3.1
05	250	5.4						3.1
06	260	6.2						3.0
07	250	7.4						3.0
08	295	7.8	250	4.7				3.0
09	350	8.6	200	5.6				2.5
10	400	9.6	220	5.6				2.6
11	400	10.5	220	5.6				2.6
12	400	11.5	215	5.6				2.6
13	355	11.8	230	5.4				2.7
14	350	12.2	250	5.3				2.8
15	325	12.5	205	5.1				2.9
16	300	12.3	250	4.9				3.0
17	300	12.0	200	4.0				3.0
18	250	11.4						3.0
19	280	10.2						2.9
20	300	10.0						2.8
21	300	9.3						2.9
22	300	9.0						2.9
23	300	8.1						2.9

Time: 150.0°W.
Sweep: 2.2 Mc to 16.0 Mc in one minute.

Table 17

Guam I. (13.5°N, 144.8°E) August 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	foE	fEs	F2-M3000
00	280	(9.6)					2.8	2.9
01	250	(9.7)					2.8	3.1
02								
03								
04								
05	230	6.2						3.2
06	250	5.9						3.0
07	240	8.0			110		4.6	3.1
08								
09								
10								
11	330	10.6	190	5.8	100		6.0	2.4
12	370	10.8	190	6.0	100		7.2	2.4
13	380	11.6	190	5.8	100		6.0	2.5
14								
15								
16								
17	300	13.2	230	5.3	100		7.4	2.8
18	275	12.7			110		7.0	2.7
19	300	12.2					5.5	2.5
20								
21								
22								
23	290						3.2	

Time: 150.0°E.
Sweep: Manual operation.

Table 18

Rarotonga I. (21.3°S, 159.8°W) August 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	foE	fEs	F2-M3000
00		7.5						3.0
01		7.0						3.0
02		6.2						3.1
03		4.6						3.1
04		3.7						3.0
05		3.1						2.9
06		3.0						2.7
07	260	7.1						3.1
08	250	10.0	240	4.3				3.3
09	280	11.1	245	4.8		3.8		3.2
10	280	11.7	230	5.0		4.1		3.2
11	280	11.0	240	5.2		4.2		3.2
12	295	10.1	245	5.3		4.2		3.1
13	300	10.2	215	5.1		4.0		3.0
14	290	9.8	235	5.2		4.0		2.9
15	300	10.1	230	5.0		3.8		2.9
16	285	10.1	250	4.7		3.5		2.9
17	270	10.0	260	4.5		3.2		2.9
18	260	10.1						2.9
19		9.8						3.0
20		9.7						2.9
21		9.9						2.8
22		9.2						2.9
23		8.2						3.0

Time: 157.5°W.
Sweep: 2.0 Mc to 16.0 Mc. Manual operation.

Table 19

Johannesburg, Union of S. Africa (26.2°S, 28.0°E) August 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	foE	fEs	F2-M3000
00		3.2					2.1	3.1
01		3.1						3.0
02		3.1						3.0
03		3.0						3.2
04		3.0						3.1
05		2.9						3.0
06		3.1						3.0
07	220	6.4				2.1	2.3	3.4
08	220	8.0	220	3.5	100	2.8		3.4
09	240	8.8	210	4.0	100	3.3		3.3
10	250	9.5	200	4.6	100	3.5		3.3
11	260	10.3	200	4.8	100	3.6		3.2
12	260	9.8	200	4.8	100	3.6		3.1
13	270	9.8	200	4.8	100	3.6		3.0
14	260	9.9	200	4.8	100	3.6		3.0
15	250	9.8	210	4.5	100	3.4		3.0
16	240	9.5	220	3.8	110	3.0	3.3	3.1
17	230	9.5			100	2.4		3.1
18	210	8.6					2.3	3.2
19	210	6.6					2.4	3.2
20	230	5.0						3.3
21	230	4.3						3.3
22		3.4						3.2
23		3.3					2.2	3.1

Time: 30.0°E.
Sweep: 2.0 Mc to 15.0 Mc in eight seconds.

Table 20

Kermadec Is. (29.3°S, 177.9°W) August 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	foE	fEs	F2-M3000
00								
01								
02								
03								
04								
05								
06	320	4.2						2.7
07	275	7.2			E	2.0		3.1
08	275	8.8	260	3.9	135	2.8		3.2
09	285	9.3	265	4.5	130	3.2		3.1
10	300	9.4	260	4.8	125	3.4		3.1
11	310	9.6	265	4.8	130	3.5		3.0
12	300	9.1	250	4.8	125	3.6		3.0
13	310	8.8	255	4.8	130	3.5		3.0
14	310	8.6	255	4.6	125	3.4		3.0
15	300	8.3	265	4.6	130	3.2		2.9
16	300	8.0	275	4.2	130	2.8		2.9
17	285	8.2			125	2.2		2.9
18	270	7.4						2.9
19	275	6.2						2.7
20								
21								
22								
23								

Time: 180.0°E.
Sweep: 1.8 Mc to 12.0 Mc. Manual operation.

Table 21

Christchurch, N. Z. (43.5°S, 172.6°E) Auguet 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	270	4.6					2.8	2.9
01	260	4.6					3.2	2.9
02	260	4.1					3.1	2.9
03	260	3.9					3.0	2.9
04	250	3.5					2.8	3.0
05	250	3.3					2.8	2.9
06	250	3.1					2.8	3.0
07	240	4.8				1.5	2.8	3.2
08	230	7.3				2.3	2.9	3.3
09	230	8.0	220	4.0		2.9		3.3
10	250	8.3	225	4.4		3.2		3.2
11	250	8.6	220	4.7		3.3	4.0	(3.2)
12	260	9.2	220	4.8		3.4	4.7	(3.1)
13	250	8.9	220	4.6		3.3	5.0	3.1
14	250	8.7	220	4.4		3.2	4.0	3.2
15	250	8.6	220	4.1		3.0		(3.1)
16	230	8.3	230	3.5		2.5		3.2
17	230	7.9				1.7	2.9	3.1
18	230	7.0					2.9	2.9
19	235	6.6					1.6	2.9
20	240	5.6					1.8	2.9
21	250	5.4						2.8
22	270	5.0						2.8
23	270	4.7					2.2	2.8

Time: 172.5°E.
Sweep: 1.0 Mc to 13.0 Mc.

Table 22

Campbell I. (52.5°S, 169.2°E) August 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05		3.0						2.6
06								
07		5.4						3.0
08		7.1						3.2
09		7.9						3.2
10		7.3						3.1
11		8.1						3.2
12		9.2						
13		8.6						3.1
14		8.6						3.1
15		8.6						3.1
16		8.4						3.1
17		7.8						2.9
18		7.1						2.9
19		6.6						2.8
20								
21		5.3						2.7
22								
23								

Time: 165.0°E.
Sweep: 1.0 Mc to 15.0 Mc. Manuel operation.

Table 23

Tromso, Norway (69.7°N, 18.9°E) July 1946*

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05								
06	446	6.0		4.4		3.1		
07	397	6.1		4.6		3.2		
08	397	6.0		4.8		3.3		
09	390	6.2		4.7		3.3		
10	404	6.2		4.8		3.4		
11	400	6.2		5.0		3.4		
12	404	6.0		4.8		3.4		
13	382	5.9		4.8		3.4		
14	416	6.1		4.8		3.3		
15	371	6.0		4.6		3.2		
16	373	5.9		4.5		3.2		
17	354	5.7		4.4		3.0		
18	320	5.6		4.0		3.0	4.0	
19	310	(5.4)				3.2		
20	310	(5.0)				(3.1)		
21	(342)	(4.8)				(2.8)	4.8	
22	(342)						4.8	
23								

Time: 0.0°.
Sweep: 0.8 Mc to 11.4 Mc in five minutes.
*From 2300 through 0500, no values reported.

Table 24

Ceiro, Egypt (30.6°N, 31.9°E) July 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E*	fEs	F2-M3000
00		9.0				2.4		2.8
01		8.6				2.8		
02		7.9				2.6		2.8
03		7.5				2.4		
04		6.8						2.8
05		6.6				2.4		
06		7.8				2.8		3.0
07		8.2				3.4		
08		8.0				4.6		2.8
09		7.8				5.3		
10		8.4				5.2		2.6
11		9.4		5.2		5.0		
12		10.4		5.3		4.6		2.6
13		10.6		5.2		4.6		
14		10.6		5.2		3.8		2.7
15		10.4				4.2		
16		10.6				4.6		2.8
17		10.0				4.6		
18		9.8				4.7		2.8
19		8.8				3.8		
20		8.5				3.2		2.6
21		8.5				4.0		
22		9.0				3.5		2.5
23		9.0				3.0		

Time: 30.0°E.
*"Extent of E." (See p. 3, last paragraph.)

Table 25 (Supersedes Table 16, CRPL-F35)

Okinawa I. (26.3°N, 127.9°E) July 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		8.4					4.7	2.6
01		8.3					4.6	2.8
02		7.8					4.5	2.8
03		6.8					3.6	2.7
04		6.3					3.2	2.7
05		6.0					3.2	2.7
06		6.4					3.8	3.0
07		7.4				(2.6)	5.0	3.2
08		7.5				3.1	5.3	3.0
09		7.6		(5.3)		3.5	5.3	2.9
10		7.9		5.5		3.8	5.4	2.7
11		8.8		5.5		4.0	5.8	2.6
12		8.9		5.6		4.0	5.8	2.6
13		10.8		5.5		4.0	5.8	2.7
14		10.7		5.5		4.0	5.4	2.6
15		10.9		5.5		3.8	5.7	2.7
16		11.1		5.2		3.6	5.1	2.8
17		11.4		5.0		3.3	5.5	2.8
18		11.0				2.8	5.3	2.9
19		9.7					4.7	2.9
20		8.8					4.6	2.6
21		8.4					4.0	2.6
22		8.4					3.4	2.6
23		8.4					4.2	2.6

Time: 135.0°E.
Sweep: Manual operation.

Table 26 (Supersedes Table 17, CRPL-F25)

Leyte, Philippine Is. (11.0°N, 125.0°E) July 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		9.0					2.6	2.8
01		7.7						2.9
02		7.0						2.9
03		6.6						2.9
04		6.1						3.0
05		5.8						3.2
06		5.2						3.1
07		7.1				2.3	3.0	3.1
08		8.8				3.0	5.0	3.0
09		9.3				3.5	5.6	2.6
10		10.1					6.2	2.5
11		10.3					6.2	2.4
12		10.3		5.8			7.8	2.3
13		10.1		5.7			6.8	2.2
14		10.2		5.6			7.8	2.2
15		10.0		5.6			7.4	2.2
16		10.6					7.1	2.3
17		10.5				3.2	5.9	2.3
18		10.3					4.8	2.4
19		10.2					3.0	2.4
20		9.4					2.2	2.4
21		8.8						2.4
22		9.0						2.5
23		8.8					2.5	2.6

Time: 135.0°E.
Sweep: Manual operation. Lower limit of frequency 1.6 Mc.

Table 27

Townsville, Australia (19.4°S, 146.5°E) July 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	250	4.1					2.8	(3.0)
01	250	4.0					2.7	(3.2)
02	250	3.5					2.5	(3.3)
03	230	3.1					2.9	(3.2)
04	250	2.8					2.6	(2.8)
05	260	3.1					2.8	(2.9)
06	260	3.5					2.5	(3.1)
07	230	6.5				2.1	3.0	(3.4)
08	235	8.0				2.8	3.7	3.4
09	250	9.0	225			3.0	3.6	3.4
10	250	9.4	215	4.8		3.5	3.8	3.4
11	250	9.5	205	5.0		3.5	3.9	3.4
12	260	8.8	200	5.1		3.5	4.0	3.3
13	290	8.5	200	5.1		3.5	4.0	3.1
14	282	8.8	200	5.1		3.5	3.8	3.1
15	260	8.5	200	4.9		3.3	4.0	3.2
16	245	8.4				3.0	3.5	3.2
17	240	8.0					3.0	3.2
18	228	7.3					3.3	3.2
19	220	5.8					3.0	3.2
20	230	5.1					3.0	3.0
21	250	5.0					3.0	3.1
22	242	4.5					2.9	3.1
23	250	4.4					2.8	3.1

Time: 150.0°E.
Sweep: 1.0 Mc to 13.0 Mc in one minute, fifty-five seconds.

Table 28

Brisbane, Australia (27.5°S, 153.0°E) July 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	300	4.2						2.9
01	290	4.2						2.9
02	280	4.1						3.0
03	280	3.8						3.0
04	290	3.6						2.8
05	290	3.4						2.8
06	280	3.7						3.0
07	230	6.6						3.3
08	240	8.5				2.0		3.3
09	245	9.6	230		115	3.0		3.3
10	260	9.5	230		110	3.4		3.2
11	260	9.0	220	5.0	105	3.4	3.0	3.2
12	270	8.7	215	5.0	110	3.4	3.8	3.1
13	280	9.0	210	5.0		3.4	4.5	3.1
14	280	9.2	222	4.6		3.3	3.8	3.0
15	260	8.6	230			3.1	3.0	3.1
16	240	8.0				2.5	3.7	3.1
17	240	8.0					2.7	3.1
18	240	6.6					3.1	3.1
19	250	5.9						2.9
20	270	5.3						3.0
21	280	5.0						2.9
22	280	4.5						3.0
23	300	4.2						2.8

Time: 150.0°E.
Sweep: 2.2 Mc to 12.5 Mc in two minutes, thirty seconds.

Table 29 (Supersedes Table 13, CRPL-F24)

Watheroo, W. Australia (30.3°S, 115.9°E) July 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	265	3.6					2.9	2.9
01	272	3.5					3.0	2.8
02	262	3.7					2.9	2.8
03	265	3.8					3.0	3.0
04	250	3.6					2.9	2.9
05	240	3.4					2.9	2.9
06	245	3.0					2.9	3.0
07	240	4.7				1.7	3.0	3.2
08	230	7.5				2.4	2.9	3.4
09	245	8.4	230	4.1		2.8	3.0	3.4
10	260	9.1	230	4.5		3.1	3.3	3.3
11	255	9.3	225	4.8		3.3	3.6	3.3
12	270	9.1	220	4.8		3.3	3.8	3.1
13	275	9.6	215	4.8		3.3	4.1	3.1
14	270	9.5	230	4.6		3.2	4.1	3.1
15	255	9.6	225	4.2		3.1	3.8	3.1
16	245	9.6	240	3.6		2.6	3.9	3.1
17	235	8.7				2.0	3.2	3.2
18	220	7.2				0.9	3.8	3.1
19	225	5.7					3.2	3.1
20	225	4.7					3.0	3.2
21	245	3.8					3.0	3.0
22	270	3.7					2.9	2.9
23	270	3.5					3.0	2.8

Time: 120.0°E.
Sweep: 16.0 Mc to 0.5 Mc in fifteen minutes.

Table 30

Canberra, Australia (35.3°S, 149.0°E) July 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	300	4.0						2.7
01	315	4.0						2.7
02	300	4.0					2.1	2.8
03	300	3.8						2.7
04	300	3.9						2.7
05	280	3.6						2.8
06	290	3.3						2.7
07	255	4.5						2.9
08	250	7.2			120	2.4		3.1
09	250	8.1	250	4.0	110	2.9		3.1
10	270	8.6	240	4.3	110	3.2		3.1
11	260	8.6	240	4.4	110	3.2		3.0
12	280	8.6	245	4.5	110	3.3		3.0
13	275	8.7	250	4.4	110	3.3		3.0
14	270	8.4	240	4.3	110	3.1		3.0
15	250	8.4	250	4.0	110	3.0	3.1	3.0
16	250	8.1			110	2.5		3.0
17	250	7.6				2.0	2.6	3.0
18	250	6.6					3.4	3.0
19	250	5.6					2.2	2.9
20	260	5.2						2.8
21	290	4.5						2.8
22	300	4.4						2.8
23	300	4.1						2.7

Time: 150.0°E.
Sweep: 1.6 Mc to 12.5 Mc in two minutes.

Table 31 (Supersedes Table 20, CRPL-F25)

Hobart, Tasmania (42.8°S, 147.4°E) July 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	255	3.0					2.9	3.1
01	275	2.9					2.8	3.1
02	270	2.8					2.8	3.2
03	250	2.7					2.8	3.2
04	250	2.7					2.1	3.2
05	250	2.6					1.8	3.3
06	250	2.5					2.1	3.2
07	245	2.9						3.4
08	220	5.5			150	2.0	2.5	3.6
09	220	7.2			100	2.6	2.8	3.6
10	225	8.0	200		100	3.0	2.9	3.5
11	240	8.9	218		100	3.2	3.2	3.4
12	240	9.5	210	4.4	100	3.2	3.3	3.4
13	240	9.2	200	4.3	100	3.1	3.5	3.3
14	225	9.0	208	4.0	100	3.0	2.8	3.3
15	225	8.8	205		100	2.8	3.0	3.3
16	225	8.5				2.3	2.8	3.4
17	215	7.6				1.8	2.8	3.3
18	220	6.6					2.6	3.3
19	225	5.5					2.5	3.2
20	225	4.6					2.2	3.3
21	240	4.0					2.1	3.2
22	250	3.5					2.7	3.1
23	250	3.2					2.9	3.1

Time: 150.0°E.
Sweep: 1.0 Mc to 13.0 Mc in one minute, fifty-five seconds.

Table 32

Tromso, Norway (69.7°N, 18.9°E) June 1946*

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05								
06	372	6.1		4.6		3.0		
07	390	6.0		4.6		3.1		
08	386	6.2		4.7		3.2		
09	407	6.4		4.8		3.3		
10	390	6.6		4.7		3.3		
11	374	6.3		4.8		3.3		
12	390	6.0		4.8		3.3		
13	380	6.0		4.8		3.3		
14	370	6.0		4.6		3.2		
15	386	6.2		4.6		3.1		
16	350	6.0		4.5		3.2		
17	350	5.8		4.4		3.0		
18	324	5.8		3.9		3.0		
19	334	5.5				3.0	4.9	
20	355	5.4				3.1	5.0	
21	360	5.2				2.9	5.5	
22	(322)	(5.2)				3.2		
23								

Time: 0.0°.
Sweep: 0.8 Mc to 11.4 Mc in five minutes.
*From 2300 through 0500, no values reported.

Teble 33

Felkland Is. (51.7°S, 57.7°W) June 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs*	F2-M3000
00		2.8						2.7
01		2.8						
02		2.8						(2.7)
03		2.8						
04		2.8						(2.8)
05		2.6						
06		2.6						(3.1)
07		3.0						
08		5.3					2.6	3.4
09		7.0					3.6	
10		7.6					3.6	3.4
11		8.1					3.8	
12		7.6					3.4	(3.4)
13		7.4					3.0	
14		7.6					2.8	3.5
15		6.4					2.6	
16		5.2					2.3	3.4
17		4.1					2.4	
18		3.0					2.4	3.4
19		2.5						
20		2.5						3.0
21		2.5						
22		2.6					2.4	(2.6)
23		2.7					2.5	

Time: 60.0°W.
*Extent of E. (See p. 3, last paregreph.)

Table 34

Peshewar, Indie (34.0°N, 71.5°E) May 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E**	fEs***	F2-M3000
00								
01								
02								
03								
04								
05								
06								
07	300	7.8				3.5		
08	330	8.5				3.8		2.9
09	360	9.3				4.0		
10	390	10.2				4.1		
11	390	10.9				4.1		
12	390	11.2				4.0		2.6
13	375	11.8				3.6		
14	360	11.7				3.6		
15	360	10.9				3.8		
16	360	10.6				3.9		2.8
17	360	10.2				4.1		
18	330	9.7				4.6		
19	360	9.1				4.3		
20	360	8.4				3.8		2.8
21	360	8.0						
22	375	7.4						
23	360	7.5						

Time: Local.
Sweep: Manual operetion.
*Haight at 0.83 f°F2.
**Data include "both normal and ebnormal velues."
***Medien velues, except F2-M3000, which are computed from average velues.

Table 35

Delhi, India (28.6°N, 77.1°E) May 1946

Time	h'F2*	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000**
00	390	6.5						
01	390	7.0						
02	390	6.6						
03	390	6.4						
04	360	6.4						2.9
05	360	6.6						
06	360	7.0						
07	360	8.0						
08	360	8.6						2.7
09	390	9.5						
10	420	10.3						
11	420	11.2						
12	420	12.2						2.5
13	390	12.4						
14	390	13.0						
15	390	(12.1)						
16	390	(12.0)						
17	390	(11.5)						
18	390	11.0						
19	375	9.8						
20	(375)	(9.2)						
21	390	7.2						
22	390	7.4						
23	390	7.1						

Time: Local.
Swesp: Manual operetion.
*Height et 0.83 f°F2.
**Medien velues, excent F2-M3000, which are computed from everege velues.

Table 36

Bombay, India (19.0°N, 73.0°E) May 1946

Time	h'F2*	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000**
00								
01								
02								
03								
04								2.6
05								
06	(330)	(6.0)						
07	330	8.0						
08	390	9.4						2.5
09	450	10.4						
10	480	10.9						
11	510	11.8						
12	510	13.0						
13	510	13.9						
14	465	14.3						
15	480	14.3						
16	420	14.0						2.6
17	420	14.3						
18	420	13.7						
19	420	12.6						
20	450	11.2						
21	450	9.0						
22	450	8.6						
23								

Time: Local.
Swesp: Manual operation.
*Height et 0.83 f°F2.
**Medien velues, except F2-M3000, which ere computed from average velues.

Table 37

Madras, India (13.0°N, 80.2°E) May 1946

Time	h'F2 *	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000 **
00								
01								
02								
03								
04								
05								
06								
07	360	9.0						
08	420	10.4						2.5
09	420	10.8						
10	465	10.5						
11	540	10.4						
12	465	10.4						2.4
13	480	10.8						
14	450	11.3						
15	450	11.6						
16	465	12.4						2.4
17	450	12.4						
18	435	12.0						
19	(480)	11.8						
20	(480)	(11.3)						2.4
21	(435)	(10.6)						
22								
23								

Time: Local.
Sweep: Manual operation.
*Height at 0.83 foF2.
**Median values, except F2-M3000, which are computed from average values.

Table 38

Falkland Is. (51.7°S, 57.7°W) May 1946

Time	h'F2	foF2	h'F1	foF1	h'E	foE	* fEs	F2-M3000
00		3.0						2.5
01		3.0						
02		3.0						2.6
03		3.0						
04		2.9						2.8
05		3.0						
06		2.8						3.2
07		4.0						
08		6.7						3.2
09		8.0					3.2	
10		8.8					3.6	3.2
11		9.4					3.4	
12		8.8					3.2	3.2
13		8.4					2.8	
14		7.8					2.5	3.2
15		8.0					2.4	
16		6.2						3.3
17		5.0						
18		3.8						3.2
19		3.0						
20		2.8						2.8
21		2.8						
22		2.8						2.6
23		2.9						

Time: 60.0°W.
*Extent of E. (See p. 3, last paragraph.)

Table 39

Peshawar, India (34.0°N, 71.5°E) April 1946

Time	h'F2 *	foF2	h'F1	foF1	h'E	foE **	fEs	F2-M3000 ***
00								
01								
02								
03								
04								
05								
06								
07	300	8.3				3.3		
08	300	9.1				3.4		3.0
09	330	10.1				3.5		
10	360	11.2				3.6		
11	360	11.8				3.6		
12	390	12.5				3.6		2.9
13	375	12.4				3.6		
14	390	12.6				3.6		
15	360	12.2				3.5		
16	360	11.6				3.4		2.8
17	330	11.2				3.4		
18	330	10.9				3.2		
19	330	9.6				3.2		
20	330	8.0				3.2		2.8
21	360	7.5				3.2		
22	390	7.1				3.2		
23	390	6.8						

Time: Local.
Sweep: Manual operation.
*Height at 0.83 foF2.
**Data include "both normal and abnormal values."
***Median values, except F2-M3000, which are computed from average values.

Table 40

Delhi, India (28.6°N, 77.1°E) April 1946

Time	h'F2 *	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000 **
00	390	7.4						2.6
01	390	6.6						
02	360	6.5						
03	390	5.7						
04	360	6.1						2.8
05	360	5.8						
06	360	7.0						
07	360	8.3						
08	360	9.7						2.7
09	390	10.4						
10	420	11.6						
11	420	12.6						
12	390	13.7						2.8
13	390	(13.9)						
14	390	(14.0)						
15	420	(13.5)						
16	(390)	(13.4)						
17	(390)	(12.5)						
18	390	(12.0)						
19		(11.6)						
20								
21								
22	390	8.2						
23	390	7.9						

Time: Local.
Sweep: Manual operation.
*Height at 0.83 foF2.
**Median values, except F2-M3000, which are computed from average values.

Table 41

Bombay, India (19.0°N, 73.0°E) April 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								2.7
01								
02								
03								
04	330	(5.6)						2.8
05								
06	300	(6.2)						
07	330	8.5						
08	390	10.8						2.7
09	420	12.0						
10	450	13.0						
11	480	13.8						
12	480	13.9						
13	480	14.4						
14	480	14.3						
15	420	14.5						
16	420	14.4						2.5
17	420	14.2						
18	420	13.8						
19	450	13.5						
20	450	12.8						2.5
21	420	12.2						
22	420	12.0						
23	390	(11.8)						

Time: Local.
Sweep: Manual operation.
*Height at 0.83 f°F2.
**Median values, except F2-M3000, which are computed from average values.

Table 42

Madras, India (13.0°N, 80.2°E) April 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05								
06								
07	315	9.2						
08	360	10.0						2.7
09	420	11.1						
10	420	10.4						
11	450	10.0						
12	450	10.0						
13	450	11.8						
14	450	11.9						
15	450	11.6						
16	420	12.0						2.5
17	420	11.8						
18	405	11.5						
19	405	11.0						
20	360	10.8						2.6
21	330	10.0						
22	300	9.9						
23	300	9.4						

Time: Local.
Sweep: Manual operation.
*Height at 0.83 f°F2.
**Median values, except F2-M3000, which are computed from average values.

Table 43 (Supersedes Table 19, IRPL-F22)

Watheroo, W. Australia (30.3°S, 115.9°E) April 1946

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	255	5.2					2.9	2.8
01	260	5.2					3.1	2.8
02	250	4.8					3.0	2.9
03	240	4.7					2.8	3.0
04	240	4.1					2.9	2.9
05	260	3.8					2.8	2.8
06	250	4.0					2.8	2.9
07	240	6.6				2.0	3.2	3.3
08	240	8.7				2.7	3.3	3.3
09	450	10.0	235	4.8		3.1	3.5	3.2
10	260	10.8	225	4.8		3.3	3.7	3.2
11	262	11.1	220	5.0		3.5	3.8	3.1
12	470	11.3	218	5.0		3.5	3.8	3.1
13	470	11.3	220	5.2		3.5	3.7	3.0
14	470	11.4	230	5.0		3.4	3.8	3.0
15	260	11.3	235	5.0		3.2	3.7	3.0
16	240	11.4				2.8	3.5	3.0
17	235	10.4				2.2	3.2	3.1
18	225	9.2					3.2	3.1
19	220	7.3					2.9	3.0
20	240	6.4					3.0	3.0
21	270	6.2					3.0	3.0
22	275	5.4					2.8	2.9
23	250	5.3					3.0	2.8

Time: 120.0°E.
Sweep: 16.0 Mc to 0.5 Mc in fifteen minutes.

Table 44 (Supersedes Table 32, IRPL-F17)

Chungking, China (29.4°N, 106.8°E) November 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								2.8
01								
02								
03								
04								
05								
06	310	4.6	230					(2.9)
07	255	7.8	230					3.0
08	250	8.4	230	4.5				3.0
09	265	10.0	230	4.5				3.2
10	265	10.8	215	4.7				3.0
11	265	11.0	208	4.9				3.0
12	270	11.4	215	5.0				2.8
13	265	13.0	224	4.9				(2.7)
14	262	13.0	224	4.6				(2.9)
15	220	11.8	228	4.4				3.0
16	230	11.2	230	4.4				3.0
17	230	9.4	224					3.2
18	228	7.4						3.0
19	250	7.0						2.8
20	265	6.0						3.0
21	260	5.4						2.9
22	278	4.6						3.0
23	310	4.6						2.8

Time: 105.0°E.
Sweep: 3.3 Mc to 12.3 Mc in fifteen minutes.

Table 45 (Supersedes Table 37, IRPL-F17)

Chungking, China (29.4°N, 106.8°E) October 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	300	5.0						(3.0)
01								
02								
03							(4.5)	
04								
05		6.3						
06	280	5.4						(3.0)
07	240	7.7	210					3.6
08	240	9.0	215	4.7				3.4
09	275	9.4	210	4.8				3.2
10	280	11.4	215	5.0				3.0
11	280	13.0	210	5.0				
12	285	13.5	204	5.0				
13	260	14.0		5.0				
14	260	13.0	212	4.9				
15	240	13.0	220	4.7				(3.0)
16	230	12.6	210	4.6				(3.0)
17	225	11.7	210					(3.3)
18	210	9.1						3.4
19	220	8.0						(3.0)
20	240	7.2						(3.1)
21	260	6.1						3.0
22	290	5.8						3.0
23	320	5.5						3.0

Time: 105.0°E.
Sweep: 3.3 Mc to 12.3 Mc in fifteen minutes.

Table 46 (Supersedes Table 40, IRPL-F16)

Chungking, China (29.4°N, 106.8°E) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05	(250)							
06	280	(6.0)						
07	240	6.6						3.9
08	240	7.0						3.8
09	270	7.8						3.7
10	310	8.0						3.3
11	320	8.3		5.2				3.3
12	305	12.8						(3.5)
13	280	13.0		5.3				3.6
14	260	14.0		5.0				3.5
15	250	14.0						3.6
16	230	12.0						3.9
17	240	11.2						3.8
18	240	9.7						3.8
19	240	8.3						3.9
20	240	7.4						3.5
21	290	6.4					4.8	3.3
22	335	6.0						3.1
23	310	6.1						3.1

Time: 105.0°E.
Sweep: 3.3 Mc to 12.3 Mc in fifteen minutes.

Table 47 (Supersedes Table 29, IRPL-F15)

Chungking, China (29.4°N, 106.8°E) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05								
06	280	6.4						
07	280	7.2						
08	280	(7.5)						
09	290	(7.8)						
10	310	(9.2)						
11		(9.0)						
12								
13								
14	320	(D)						
15	290	D						
16	275	D						
17	280	12.0						
18	260	9.8						
19	240	10.4						
20	260	9.0						
21	280	9.0						
22	300	7.8						
23	300	7.9						

Time: 105.0°E.
Sweep: 3.3 Mc to 12.3 Mc in fifteen minutes.

Table 48*

San Francisco, California (37.4°N, 122.2°W) October 1943

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	255	5.8	238	3.2	112	2.3	2.7	3.5
01	239	5.3	255	2.8	112	1.9	2.8	3.5
02	230	4.2				1.7	3.0	3.4
03	248	3.1					3.0	3.2
04	268	2.8					3.0	3.1
05	278	2.8					3.2	3.0
06	283	3.0					3.2	3.1
07	283	3.0					3.6	3.0
08	266	3.1					2.8	3.1
09	271	3.2					2.6	3.1
10	273	3.1					2.7	3.1
11	272	3.1					2.8	3.1
12	269	3.2					2.9	3.1
13	266	3.2	300	2.3			2.6	3.1
14	267	3.2			120	1.4	2.6	3.1
15	271	4.5	247	2.9	130	1.9	2.8	3.4
16	296	5.1	238	3.4	118	2.3	3.2	3.3
17	310	5.5	229	3.7	118	2.7	3.4	3.3
18	318	5.5	222	3.9	116	2.9	3.6	3.2
19	318	5.7	210	4.0	113	2.9	4.4	3.2
20	311	6.1	212	4.0	110	3.0	3.5	3.2
21	300	6.3	230	4.0	110	2.9	3.2	3.2
22	300	6.1	234	3.9	112	2.9	3.2	3.2
23	277	6.1	240	3.6	112	2.6	3.2	3.3

Time: GMT
Sweep: 0.8 Mc to 12.0 Mc in six minutes.
*Average values.

Table 40*

San Francisco, California (37.4°N, 122.2°W) September 1943

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	301	5.2	235	3.6	109	2.5	3.4	3.2
01	277	4.9	242	3.2	111	2.2	3.1	3.3
02	248	4.8	247	2.5	115	1.6	2.8	3.3
03	240	4.2					3.2	3.2
04	251	3.7					2.9	3.2
05	261	3.3					2.4	3.1
06	272	3.1					2.8	3.1
07	270	2.9					3.0	3.1
08	266	2.9					2.6	3.0
09	269	2.9					2.2	3.0
10	272	2.8					2.1	3.0
11	277	2.8					2.3	3.0
12	287	2.7					2.3	3.0
13	295	2.7					2.5	3.0
14	285	3.2	277	2.6	111	1.6	2.8	3.1
15	345	4.2	241	3.2	113	2.2	3.7	3.1
16	365	4.7	224	3.6	113	2.5	3.4	3.1
17	354	5.0	215	3.8	109	2.8	3.2	3.3
18	352	5.2	210	4.0	109	3.0	3.4	3.1
19	371	5.3	211	4.1	109	3.0	3.4	3.0
20	373	5.4	217	4.1	106	3.1	4.1	3.0
21	363	5.7	214	4.1	106	3.1	3.7	3.1
22	338	5.6	228	4.0	107	3.0	3.6	3.1
23	338	5.4	227	3.9	107	2.8	3.6	3.1

Time: GMT
Sweep: 0.8 Mc to 12.0 Mc in six minutes.
*Average values.

Table 41*

San Francisco, California (37.4°N, 122.2°W) August 1943

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	390	4.9	235	3.9	109	2.8	3.7	2.9
01	338	4.9	246	3.6	112	2.4	3.6	3.0
02	288	4.9	258	3.1	117	2.0	3.6	3.1
03	256	4.6				1.5	3.7	3.3
04	260	4.5					4.0	3.1
05	266	3.7					3.9	3.1
06	286	3.2					3.7	3.1
07	293	3.0					3.1	3.0
08	287	2.9					3.1	3.0
09	291	2.9					3.0	3.0
10	285	2.8					2.9	3.0
11	291	2.7					2.8	3.0
12	280	2.6					3.0	3.1
13	290	2.4			110	1.1	2.8	3.0
14	338	3.6	250	2.8	114	1.8	3.3	3.1
15	420	4.0	239	3.4	111	2.2	3.7	2.9
16	407	4.5	223	3.7	108	2.6	3.9	2.9
17	471	4.7	222	3.9	109	2.9	4.5	2.7
18	434	5.0	220	4.0	109	3.0	4.6	2.8
19	441	5.0	220	4.1	109	3.0	4.3	2.8
20	416	5.2	225	4.2	107	3.0	4.4	2.9
21	435	5.1	232	4.2	110	3.0	4.0	2.8
22	413	5.1	235	4.1	108	3.0	4.1	2.9
23	420	4.9	232	4.0	108	3.0	3.9	2.8

Time: GMT
Sweep: 0.8 Mc to 12.0 Mc in six minutes.
* verage values.

Table 42*

San Francisco, California (37.4°N, 122.2°W) July 1943

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	385	4.8	233	4.0	112	2.9	4.5	3.0
01	365	4.8	234	3.7	111	2.6	4.2	3.0
02	310	4.8	237	3.3	113	2.2	3.2	3.1
03	266	5.0	260	2.7		1.7	3.5	3.3
04	258	5.1					4.3	3.3
05	261	4.7					4.1	3.3
06	271	4.1					4.2	3.2
07	278	3.5					4.1	3.2
08	281	3.4					3.9	3.1
09	280	3.1					3.6	3.1
10	282	3.0					3.7	3.1
11	279	2.9					3.4	3.1
12	275	2.7					2.9	3.2
13	302	2.9	290	2.2	127	1.4	2.9	3.1
14	385	3.7	244	3.1	120	2.1	3.5	3.1
15	408	4.3	235	3.5	111	2.4	4.6	2.9
16	416	4.7	220	3.8	112	2.7	4.5	2.9
17	453	4.9	215	4.0	110	3.0	4.8	2.7
18	424	5.1	228	4.2	112	3.1	5.1	2.8
19	419	5.4	217	4.2	112	3.2	5.5	2.8
20	419	5.3	231	4.2	114	3.1	4.8	2.9
21	390	5.4	234	4.2	115	3.2	5.6	3.0
22	404	5.2	228	4.2	112	3.1	5.4	2.9
23	416	5.0	225	4.1	112	3.1	5.1	3.0

Time: GMT
Sweep: 0.8 Mc to 12.0 Mc in six minutes.
*Average values.

Table 43*

San Francisco, California (37.4°N, 122.2°W) June 1943

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	370	5.6	235	4.1	112	2.9	4.2	3.2
01	346	5.4	235	3.8	113	2.6	4.4	3.3
02	313	5.3	237	3.4	114	2.2	4.6	3.3
03	274	5.6	250	2.8	130	1.6	4.2	3.5
04	256	5.8					3.7	3.4
05	262	5.3					4.0	3.4
06	267	4.5					4.5	3.4
07	283	3.9					3.9	3.3
08	291	3.6					3.8	3.3
09	298	3.4					3.8	3.3
10	290	3.3					3.6	3.2
11	291	3.2					3.8	3.2
12	296	3.1					3.6	3.3
13	310	3.3	270	2.4	140	1.4	3.6	3.3
14	385	4.2	248	3.3	123	2.1	3.8	3.3
15	360	4.8	230	3.7	115	2.4	4.5	3.3
16	376	5.2	225	4.0	113	2.8	4.4	3.2
17	393	5.5	222	4.2	113	3.0	5.5	3.1
18	400	5.4	226	4.2	112	3.1	5.3	3.1
19	435	5.5	216	4.3	111	3.2	5.1	3.0
20	398	5.5	215	4.3	110	3.1	5.1	3.1
21	385	5.7	228	4.3	112	3.1	5.3	3.1
22	377	5.8	224	4.2	112	3.1	5.1	3.1
23	370	5.7	234	4.2	111	3.1	4.3	3.2

Time: GMT
Sweep: 0.8 Mc to 12.0 Mc in six minutes.
*Average values.

Table 53*

San Francisco, California (37.4°N, 122.2°W) May 1943

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	358	5.3	223	4.0	112	2.9	4.1	3.1
01	321	5.2	229	3.8	113	2.5	4.0	3.3
02	290	5.3	240	3.3	116	2.1	4.0	3.2
03	250	5.5			130	1.6	4.3	3.3
04	243	5.3					4.2	3.3
05	248	4.9					4.2	3.3
06	263	4.1					3.8	3.2
07	291	3.7					4.0	3.1
08	289	3.7					4.0	3.1
09	278	3.6					3.5	3.1
10	275	3.4					3.2	3.1
11	278	3.2					3.8	3.2
12	279	3.1					3.5	3.2
13	277	3.2			130	1.6	3.5	3.2
14	331	4.0	240	3.3	124	2.1	3.6	3.2
15	379	4.6	229	3.7	115	2.5	3.8	3.0
16	368	5.2	220	3.9	113	2.8	4.0	3.0
17	366	5.5	224	4.2	112	3.0	4.4	3.1
18	420	5.4	213	4.3	112	3.1	4.3	2.9
19	406	5.6	204	4.3	111	3.2	5.1	2.9
20	420	5.8	211	4.3	111	3.2	4.7	2.8
21	410	5.9	220	4.3	111	3.2	4.6	2.9
22	388	5.8	223	4.3	111	3.2	4.4	3.0
23	361	5.5	231	4.2	112	3.1	4.1	3.1

Time: GMT
Sweep: 0.8 Mc to 12.0 Mc in six minutes.
*Average values.

Table 54*

San Francisco, California (37.4°N, 122.2°W) April 1943

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	308	6.2	234	3.9	113	2.8	3.4	3.2
01	280	6.0	234	3.5	113	2.4	3.4	3.3
02	250	5.8	242	3.1	128	1.9	3.1	3.3
03	240	5.6					2.8	3.3
04	249	4.8					2.8	3.3
05	265	4.1					2.8	3.2
06	282	3.6					2.9	3.0
07	292	3.5					3.0	2.9
08	287	3.5					2.7	2.9
09	289	3.5					2.9	3.0
10	283	3.4					2.7	3.0
11	277	3.3					2.7	3.0
12	280	3.0					2.5	3.0
13	287	3.0					2.8	3.1
14	274	3.7	242	2.9	135	1.8	3.0	3.1
15	327	4.8	234	3.5	121	2.3	3.2	3.1
16	364	5.3	228	3.8	118	2.7	3.5	3.1
17	359	5.8	223	4.0	117	2.9	3.7	3.0
18	348	6.0	219	4.3	115	3.1	3.8	3.0
19	378	6.1	216	4.4	117	3.2	3.9	2.9
20	359	6.5	217	4.4	115	3.2	3.7	3.0
21	361	6.6	215	4.4	116	3.3	3.9	3.0
22	345	6.6	223	4.3	116	3.2	4.7	3.0
23	320	6.5	225	4.1	115	3.1	3.6	3.1

Time: GMT
Sweep: 0.8 Mc to 12.0 Mc in six minutes.
*Average values.

Table 55*

San Francisco, California (37.4°N, 122.2°W) March 1943

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	268	6.8	233	3.8	111	2.7	3.5	3.3
01	244	6.5	238	3.2	113	2.3	3.3	3.4
02	226	5.9			105	1.7	3.0	3.4
03	231	4.5					3.1	3.3
04	237	3.6					2.8	3.3
05	257	3.1					2.8	3.2
06	271	3.1					2.9	3.1
07	270	3.2					2.7	3.1
08	267	3.2					2.8	3.0
09	283	3.2					2.7	3.0
10	273	3.3					2.8	3.0
11	274	3.3					2.7	3.0
12	268	3.4					2.6	3.1
13	272	3.4					2.8	3.1
14	262	3.6					2.9	3.2
15	253	4.9	246	3.2	124	1.9	3.1	3.4
16	277	5.6	229	3.6	113	2.5	3.4	3.3
17	294	6.0	226	4.1	112	2.8	3.6	3.3
18	310	6.3	223	4.3	111	3.1	3.9	3.1
19	323	6.8	220	4.4	110	3.2	4.6	3.1
20	311	7.3	225	4.4	109	3.3	4.2	3.1
21	305	7.5	229	4.4	110	3.2	4.2	3.1
22	296	7.6	232	4.4	110	3.2	4.0	3.2
23	282	7.3	231	4.2	112	3.0	3.7	3.3

Time: GMT
Sweep: 0.8 Mc to 12.0 Mc in six minutes.
*Average values.

Table 56*

San Francisco, California (37.4°N, 122.2°W) February 1943

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	240	6.2	229	3.4	113	2.4	3.4	3.5
01	226	5.5	237	3.0	126	2.0	3.0	3.5
02	221	4.4				1.5	3.0	3.3
03	237	3.5					3.1	3.3
04	243	3.2					2.8	3.3
05	252	2.9					3.1	3.3
06	262	3.1					3.2	3.3
07	256	3.2					3.1	3.3
08	248	3.2					3.0	3.2
09	252	3.1					2.9	3.2
10	253	3.1					2.9	3.2
11	252	3.1					2.7	3.2
12	254	3.1					2.9	3.2
13	259	3.1					2.7	3.2
14	260	3.1					2.7	3.2
15	244	4.2			131	1.6	2.8	3.3
16	239	5.6	223	3.3	119	2.2	3.1	3.5
17	247	5.9	226	3.8	114	2.6	3.4	3.4
18	274	6.3	230	4.2	114	2.9	3.5	3.3
19	288	6.8	225	4.2	113	3.1	4.0	3.2
20	274	7.3	226	4.3	113	3.1	3.9	3.3
21	277	7.1	222	4.3	115	3.1	4.0	3.3
22	270	6.7	231	4.2	115	3.0	3.5	3.3
23	259	6.5	225	3.9	112	2.8	3.5	3.4

Time: GMT
Sweep: 0.8 Mc to 12.0 Mc in six minutes.
*Average values.

Table 57*

San Francisco, California (37.4°N, 122.2°W) January 1943

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	226	5.6					3.3	3.5
01	217	4.8					3.3	3.6
02	226	3.3					3.1	3.5
03	255	2.7					3.5	3.4
04	244	2.5					3.6	3.5
05	261	2.4					3.7	3.4
06	266	2.4					3.3	3.3
07	276	2.7					3.3	3.1
08	266	2.8					3.1	3.2
09	259	2.9					2.9	3.3
10	253	3.1					2.9	3.4
11	244	3.0					3.0	3.5
12	242	2.8					3.0	3.5
13	256	2.7					3.1	3.3
14	261	2.7					3.0	3.2
15	249	3.2					2.8	3.5
16	230	5.2	233	2.7	122	2.1	3.0	3.5
17	240	5.7	219	3.3	120	2.4	3.2	3.5
18	245	5.7	218	3.7	116	2.8	3.6	3.3
19	260	6.5	222	3.9	116	2.9	3.6	3.3
20	258	7.2	218	4.0	116	3.0	3.5	3.3
21	255	7.1	212	4.0	114	3.0	3.4	3.4
22	249	6.4	220	3.9	113	2.9	3.4	3.5
23	246	6.2	217	3.5	114	2.6	3.5	3.4

Time: GMT
Sweep: 0.8 Mc to 12.0 Mc in six minutes.
*Averege velues.

Table 58*

Fairbanks, Alaska (64.9°N, 147.8°W) December 1941

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	323	2.0			100		4.2	
01	331	2.2			99		4.0	
02	342	2.4			100		4.1	
03	341	2.8	145	3.1	97	2.1	4.0	
04	329	2.7			98		3.8	
05	324	2.8			98		3.4	
06	323	2.8			98	1.2	2.8	
07	298	2.7			99	1.6	2.5	
08	296	2.8			100	1.3	2.2	
09	255	3.9			102	1.5	2.2	
10	236	5.1	215	3.2	103	1.7	2.4	
11	232	5.9	210	3.2	100	1.8		
12	230	6.6	238	3.0	100	1.8	2.1	
13	231	7.0	235	3.1	99	1.7	1.9	
14	225	6.4			100	1.5	1.4	
15	241	5.6			103	1.3	1.3	
16	236	4.7			104	1.3	1.4	
17	246	3.3			103	1.0	1.8	
18	258	2.4			102	1.0	1.9	
19	275	2.0			100		2.3	
20	297	1.8			100		2.2	
21	302	1.8			101		3.0	
22	309	1.8			104		3.6	
23	314	1.9			101		3.8	

Time: 150.0°W.
Sweep: 16.0 Mc to 0.5 Mc in fifteen minutes.
*Average values.

Table 59*

Fairbanks, Alaska (64.9°N, 147.8°W) November 1941

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	348	2.2			100		4.9	
01	368	2.4			102		4.3	
02	368	2.6			101		4.1	
03	362	2.7			99		4.1	
04	354	2.7			100		3.8	
05	353	2.7			100	0.9	3.2	
06	345	2.7			99	1.0	2.6	
07	325	2.7			100	1.3	2.2	
08	282	3.4			102	1.4	2.6	
09	262	4.6	240	2.5	105	1.7	3.6	
10	268	5.2	258	2.7	104	1.9	2.8	
11	263	5.7	244	3.0	103	2.0	2.6	
12	256	6.2	244	3.0	104	2.0	2.7	
13	250	6.4	236	3.0	105	2.0	2.3	
14	245	6.2	215	3.4	102	1.8	2.2	
15	246	5.8	215	2.9	105	1.6	2.1	
16	255	5.2			109	1.4	2.2	
17	261	4.0			110	1.4	3.5	
18	269	2.9			109	1.3	2.5	
19	288	2.1			106	1.1	3.0	
20	301	1.9			104	0.9	3.7	
21	310	1.9			102	0.8	4.0	
22	316	2.1			103		4.7	
23	318	2.1			104		5.1	

Time: 150.0°W.
Sweep: 16.0 Mc to 0.5 Mc in fifteen minutes.
*Averege values.

Table 60*

Fairbanks, Alaska (64.9°N, 147.8°W) October 1941

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	321	2.4			101	0.9	4.4	
01	313	2.3			103		4.4	
02	329	2.3			101		4.6	
03	343	2.6			100		4.4	
04	342	2.6			98	1.3	4.3	
05	325	2.6			98	1.4	3.6	
06	296	2.9			103	1.4	3.3	
07	268	3.7			109	1.7	3.5	
08	267	4.5	235	3.1	109	2.0	4.2	
09	284	5.1	236	3.4	108	2.3	2.6	
10	291	5.6	231	3.5	108	2.4	2.7	
11	277	6.1	226	3.6	108	2.5		
12	273	6.2	230	3.5	106	2.4		
13	273	6.3	234	3.5	105	2.4	2.8	
14	258	6.4	227	3.3	104	2.2	3.0	
15	257	6.2	230	3.0	108	2.0	2.4	
16	245	6.1			108	1.7	3.7	
17	243	5.5			107	1.4	2.8	
18	253	4.5			107	1.2	3.6	
19	262	3.5			106	1.0	3.5	
20	273	2.8			109	1.0	3.7	
21	280	2.5			104	1.6	4.6	
22	289	2.4			105		4.9	
23	302	2.4			104		5.2	

Time: 150.0°W.
Sweep: 16.0 Mc to 0.5 Mc in fifteen minutes.
*Averege velues.

Table 61*

Fairbanks, Alaska (64.9°N, 147.8°W) September 1941

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00	313	2.8			100	1.0	5.2	
01	343	3.0			99	1.0	5.1	
02	338	3.0			100	1.2	4.9	
03	332	2.9			99	1.2	5.2	
04	319	3.0			99	1.4	4.1	
05	292	3.3			102	1.4	4.6	
06	312	3.9	251	3.2	105	2.0	3.8	
07	348	4.3	240	3.4	107	2.3	4.0	
08	350	4.5	228	3.8	107	2.5	2.6	
09	355	4.8	223	3.9	108	2.7	2.8	
10	371	5.1	223	4.1	108	2.8	3.6	
11	368	5.3	221	4.2	108	2.9	3.1	
12	355	5.3	219	4.1	107	2.8	2.9	
13	347	5.4	227	4.1	108	2.8	3.2	
14	311	5.4	228	3.9	108	2.6		
15	291	5.4	229	3.7	113	2.5	2.7	
16	284	5.3	234	3.4	113	2.3	3.1	
17	269	5.2	232	2.8	110	1.9	3.8	
18	265	4.8			112	1.7	3.6	
19	275	4.1			108	1.3	4.4	
20	281	3.5			105	1.2	3.5	
21	282	3.4			105	1.1	5.1	
22	281	3.0			102	1.0	5.7	
23	295	2.8			101	1.0	5.2	

Time: 150.0°W.
Sweep: 16.0 Mc to 0.5 Mc in fifteen minutes.
*Average values.

Table 62*

Fairbanks, Alaska (64.9°N, 147.8°W) August 1941

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00	292	3.8			105	1.2	5.2	
01	303	3.7			104	1.4	4.7	
02	304	3.7			103	1.4	3.7	
03	307	3.7	220	1.8	103	1.3	3.7	
04	326	4.2	260	2.8	102	1.8	3.5	
05	329	4.5	244	3.3	102	2.0	3.9	
06	373	4.6	231	3.7	104	2.4	5.0	
07	379	5.0	218	3.9	106	2.5	4.2	
08	417	5.1	218	4.1	105	2.8	3.5	
09	409	5.4	213	4.2	106	2.9	3.7	
10	406	5.5	206	4.3	106	2.9	7.1	
11	390	5.6	208	4.3	104	3.0	3.8	
12	389	5.6	210	4.4	106	3.0	5.2	
13	388	5.5	212	4.4	105	3.0	4.9	
14	394	5.4	214	4.3	106	2.9	4.4	
15	375	5.4	218	4.2	107	2.8	3.4	
16	337	5.4	219	4.0	110	2.6	4.9	
17	300	5.2	225	3.7	110	2.4	4.7	
18	296	5.1	239	3.3	112	2.1	4.0	
19	284	4.6	258	3.0	114	1.8	4.2	
20	283	4.3			114	1.5	4.4	
21	275	4.3			109	1.2	5.3	
22	279	4.1			108	1.1	5.5	
23	289	3.8			107	1.1	5.1	

Time: 150.0°W.
Sweep: 16.0 Mc to 0.5 Mc in fifteen minutes.
*Average values.

Table *

Fairbanks, Alaska (64.9°N, 147.8°W) July 1941

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00	291	3.7			109	1.3	5.8	
01	302	3.9			105	1.3	5.2	
02	312	4.3	300	2.4	104	1.6	5.5	
03	310	4.4	248	3.0	102	1.7	5.0	
04	347	4.7	245	3.3	101	2.0	4.8	
05	364	5.0	238	3.6	101	2.4	4.0	
06	386	5.1	213	3.8	101	2.6	4.8	
07	409	5.1	209	3.9	100	2.7	4.8	
08	422	5.1	206	4.1	102	2.8	4.1	
09	422	5.2	207	4.2	101	3.0	4.2	
10	442	5.2	206	4.3	101	3.0	4.3	
11	458	5.3	203	4.3	103	3.0	4.6	
12	457	5.2	206	4.3	103	3.1	3.5	
13	430	5.2	207	4.4	102	3.0	4.1	
14	418	5.2	204	4.3	102	3.0	4.5	
15	435	5.1	217	4.3	104	2.9	5.0	
16	403	5.1	214	4.2	106	2.8	3.4	
17	360	5.1	215	4.0	107	2.6	5.4	
18	318	5.1	228	3.7	109	2.4	5.1	
19	288	5.0	234	3.3	109	2.2	6.0	
20	276	5.0	253	3.1	111	1.9	5.6	
21	263	4.6		3.2	109	1.6	5.5	
22	267	4.4	400	3.0	111	1.3	5.5	
23	297	3.9			108	1.2	5.2	

Time: 150.0°W.
Sweep: 16.0 Mc to 0.5 Mc in fifteen minutes.
*Average values.

TABLE 64

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

h'F2 (Characteristic), km (Unit), October (Month), 1946

Observed at Washington, D.C.

Lat 39.0°N, Lang 77.5° W

75° W Mean Time

National Bureau Of Standards (Institution)

Scaled by: A.K.B., J.L.S.

Calculated by: A.M.K., B.W.D.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	300	[300]C	290	320	[300]A	[310]C	250	[230]D	(230)	[270]C	270	[270]C	310	[300]C	280	290	260	C	C	C	240	240	260	280
2	310	290	270	250	280	[280]C	250	230	230	240	270	270	280	250	270	260	250	230	230	220	230	240	270	280
3	290	280	290	280	260	260	250	230	240	240	260	260	280	270	260	260	250	230	230	230	250	250	260	270
4	300	300	280	270	250	C	C	C	C	260	250	260	280	270	270	250	230	230	220	230	240	270	[260]C	[280]C
5	280	280	250	240	250	270	250	240	240	240	270	280	270	280	270	250	240	230	230	230	240	250	270	270
6	280	280	260	250	[260]A	280	280	240	260	250	250	280	290	260	270	260	250	230	220	240	220	260	260	260
7	260	250	250	250	[250]C	260	240	230	230	C	C	C	C	C	C	C	250	230	220	220	230	250	270	260
8	260	270	250	250	250	230	240	230	220	230	250	260	250	280	270	250	250	230	210	220	230	270	270	280
9	320	280	290	290	240	260	260	250	240	270	260	260	280	270	270	250	250	230	[240]C	220	230	260	260	260
10	250	250	250	280	260	(270)	250	240	230	240	250	270	270	270	260	(260)	240	230	230	230	230	240	250	260
11	270	260	250	240	240	250	[240]A	[230]A	(230)	[250]C	250	250	260	260	260	[250]C	250	220	[220]C	240	230	250	270	290
12	290	310	310	270	250	240	250	230	(240)	240	250	250	260	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	250	C	C	C	C	C	C	270	C	C	C	C	C	C	C	C	C	C
14	300	C	C	C	C	C	310	C	C	C	C	C	(270)	C	C	C	C	C	A	C	C	C	C	C
15	260	C	C	C	C	C	270	C	C	C	C	C	(270)	C	C	260	240	230	210	[230]C	240	240	250	270
16	270	270	270	280	260	260	270	230	[240]C	(260)	260	250	260	270	260	250	230	230	[220]A	240	220	260	260	[260]A
17	260	260	260	230	240	240	230	230	220	260	250	250	250	260	250	250	240	230	230	240	(260)	[260]A	[270]A	270
18	260	280	(280)	270	260	250	(240)	230	220	C	C	C	C	C	C	C	240	230	230	240	240	250	260	270
19	260	270	240	250	260	270	270	230	230	240	240	250	260	260	260	260	230	230	[240]C	250	250	260	240	250
20	240	260	290	320	280	270	250	230	230	240	240	250	270	260	230	220	240	230	230	[250]C	240	250	(260)	260
21	280	280	270	(270)	260	250	250	240	230	240	230	240	250	[250]C	[250]C	[250]C	230	220	220	240	240	250	260	250
22	250	260	280	290	280	260	260	230	230	230	[250]C	[250]C	C	C	C	230	240	230	220	220	230	240	260	[270]C
23	290	280	270	270	260	270	[260]C	230	220	210	230	230	230	(250)	240	230	230	230	[230]C	230	240	250	C	C
24	C	C	C	C	C	C	C	C	C	220	260	260	240	220	220H	240	230	230	230	(250)	(250)	250	260	270
25	280	270	270	280	270	270	250	230	220	C	C	C	C	C	C	C	230	220	[240]C	[240]C	[250]C	[270]C	[280]C	280
26	290	260	260	270	260	270	240	240	230	230	250	260	250	[250]C	(270)	240	240	240	220	250	310K	320K	350K	320K
27	(320)K	360K	320K	240K	280K	(300)K	350	320	300	270	280	280	250	250	250	250	240	230	230	240	250	240	270	270
28	270	260	290	260	250	(260)	250	230	220	250	250	250	250	220	230	230	230	220	220	230	240	260	260	260
29	250	260	250	250	250	260	(270)	240	230H	220	240	220	260	250	240	250	230	220	210	230	240	250	260	270
30	280	280	280	280	260	250	250	230	240	240	240	260	250	C	C	230	230	220	230	230	240	240	240	250
31	270	260	260	240	240	300	290	230	230	250	240	250	240	240	250	240	230	220	210	220	250	230	260	280
Median	280	270	270	270	260	260	250	230	230	240	250	260	260	260	260	250	240	230	230	230	240	250	260	270
Count	29	27	27	27	27	26	27	26	26	25	25	25	26	23	22	25	28	27	27	27	28	28	27	27

Sweep 0.75 Mc to 11.5 Mc in 3.4 min

Manual ☐ Automatic ☒

U.S. GOVERNMENT PRINTING OFFICE 1948 O - 703819

TABLE 65

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

f°F2 (Characteristic), Mc (Unit), October (Month), 1946

National Bureau Of Standards (Institution)

Observed at Washington, D. C.

Lat 39.0°N, Long 77.5°W

75° W Mean Time

Scaled by: A. K. B., J. L. S.

Calculated by: A. M. K., B. W. D.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	4.4	[4.2]C	(3.9)	2.9	[2.0]A	1.8F	(4.4)	[6.3]C	[7.9]C	[9.0]C	9.6	[10.0]C	10.4	[10.6]C	10.5	(9.8)	10.2	C	C	C	(7.0)	[6.4]C	5.4	5.0
2	4.9	5.0	4.9	4.0	3.5F	[3.4]C	4.6	7.0	8.6	9.2	10.0	10.6	(11.4)	(11.5)	11.2	(10.7)J	(11.0)J	C	C	C	(7.2)	(6.3)	6.2	6.0
3	6.0	5.6	5.3	5.1	5.0	4.9	(5.1)	7.1	8.6	9.0	9.8	11.2	11.0	(11.3)	11.0	(10.6)	10.0	(9.3)	(8.9)	7.6	(7.4)	6.8	(6.4)J	(6.0)J
4	(5.9)J	5.6	5.5	5.5	4.9	C	C	C	C	8.8	9.6	10.4	10.6	11.0	(11.5)	(11.3)	(10.5)J	(10.7)J	[9.2]C	(8.0)J	(6.8)	(6.2)J	[6.0]C	[5.6]C
5	5.3	(5.7)J	5.6	4.7	3.8	3.4	4.3	6.8	8.0	(9.4)	(9.7)	[10.0]C	10.5J	(11.4)	11.0	10.9	(9.8)	(9.2)	(8.8)	(7.8)J	7.0	6.4	(6.0)J	(5.6)J
6	(5.5)	5.4	5.2	4.8	3.8	3.2	4.1	6.8	8.4	[9.0]C	(9.2)J	(9.9)	10.6	11.0	10.7	(10.9)	[10.8]C	(10.3)J	[9.0]C	(8.8)J	(6.4)	(6.2)J	(6.1)J	(5.7)J
7	6.0	5.4	4.9	4.6	4.3	3.7	4.1	7.5	(9.1)J	C	C	C	C	C	C	C	11.0	(10.7)J	[8.9]C	(7.5)J	6.8	(6.4)J	6.0	5.8
8	5.4	4.9	4.8F	4.7	3.7F	3.7F	4.6	7.0	7.7	9.0	9.4	11.0	10.5	10.8	11.0	(10.4)J	C	C	C	(7.4)	(6.4)	(6.0)J	5.7	(5.5)
9	5.2	5.3	5.0	4.6	4.2	3.4F	3.6F	5.8	7.3	8.7	9.0	10.4	11.0	10.6	10.7	10.2	[9.7]C	(9.0)	[8.2]C	(7.0)J	(6.4)J	(6.5)J	5.8	(5.5)J
10	5.4	5.0	4.6	4.2	3.6	3.3	3.9	7.1	(8.6)	(9.4)J	10.1	10.6	(11.5)	(11.3)	(11.3)	11.2	[10.6]C	[10.1]C	[9.3]C	(8.0)J	7.0	6.2	6.2	(5.7)
11	5.4	5.1	5.0	4.8	3.9	4.0	4.3	(7.2)	(8.8)	[10.0]C	(10.5)	11.0	(11.5)	[11.6]J	11.5	[11.5]C	(11.3)	C	C	[8.0]C	(7.0)	6.0	(5.5)	5.3
12	(5.3)	5.1	4.9	5.0	4.8	4.4	4.3	6.4	8.0	(9.2)	9.9	10.6	11.1	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	(8.2)	C	C	C	C	C	C	10.4	C	C	C	C	C	C	C	C	C	C
14	6.2	C	C	C	C	C	(5.0)	C	C	C	C	C	10.6	C	C	C	C	C	C	C	C	C	C	C
15	5.0	C	C	C	C	C	4.5	C	C	C	C	C	10.8	C	C	J	C	C	C	C	C	(6.2)	(6.0)	(5.7)J
16	[5.9]	5.7	5.5	(5.4)J	[5.2]C	5.2	5.5	(7.8)	(9.0)J	(10.6)J	11.5	D	D	⊥	⊥	⊥	C	C	C	[8.2]C	(6.6)J	(6.3)	(6.7)	(6.4)J
17	6.2	(6.0)J	5.7	(5.2)	5.1	4.9	5.2	(8.4)	(8.8)	D	D	(11.5)	D	⊥	(11.4)	C	C	C	C	(8.0)	(6.4)	(6.4)J	[6.2]A	5.8
18	5.8	(5.8)J	5.8	(5.8)J	5.2	4.6	4.7	(7.7)	(9.0)	C	C	C	C	C	C	C	C	C	C	C	C	(6.6)	(6.2)J	(6.0)J
19	(5.9)J	(5.7)J	(5.4)	(5.0)	4.7	4.2	4.8	(7.6)	[9.7]C	(10.8)J	11.2	(11.5)	(11.6)	(11.5)	C	J	C	C	C	C	C	C	C	C
20	C	(5.2)J	(5.6)J	[4.9]C	(4.9)	(4.6)J	4.7	(8.2)	[10.5]C	D	D	D	D	⊥	⊥	C	C	C	C	C	C	[6.5]C	[6.2]C	(5.9)
21	[5.4]C	(5.0)	(5.5)	(5.1)J	(4.5)F	(3.6)F	(4.1)F	(7.6)	[10.0]C	[11.2]C	11.4	D	D	C	C	C	C	C	C	C	(7.6)	6.8	(6.2)J	(6.0)J
22	(5.6)J	(5.8)J	(5.8)J	C	C	C	C	8.0	9.2	10.9	11.5	D	C	C	C	J	D	C	C	C	(7.5)	(6.2)J	(6.0)	[5.7]C
23	(5.3)J	(5.4)J	(5.3)	5.0	4.9	5.0	(5.4)J	7.5	10.4	(11.3)	⊥	D	D	⊥	⊥	J	C	C	C	(7.6)	(7.0)	6.7	C	C
24	C	C	C	C	C	C	C	C	C	(11.0)	J	D	D	J	J H	J	D	C	C	C	(8.2)J	7.0	6.4	6.4
25	(6.3)J	(5.6)J	(5.4)J	(5.3)	5.1	4.8	5.0	(7.6)	9.4	C	C	C	C	C	C	C	C	C	C	C	[7.5]C	[7.1]C	[7.0]K	(6.8)
26	6.9	6.8	(5.9)J	(5.6)J	(5.3)	5.3	(5.7)J	(8.2)	(9.0)	(11.5)	D	D	D	D	J	(11.2)	[11.0]C	(10.8)	[9.5]C	7.2	7.0K	(4.1)FK	(3.7)FK	3.7
27	(4.2)K	(3.2)F	(3.7)FK	3.6FK	(3.7)FK	2.9FK	3.2F	(5.7)J	(7.2)	8.2	(9.4)	(10.5)J	11.0	11.0	11.4	(11.0)	C	C	C	(7.0)	(6.0)	(5.2)J	(5.1)	4.8
28	4.6	(3.6)F	3.4F	3.8F	(3.6)F	2.3F	3.3F	6.6	(9.2)J	(10.8)	(11.3)	D	D	13.4*	13.4*	13.7*	12.8*	[9.9]C	[8.5]C	(7.6)	(7.0)	6.4	(6.0)	(5.6)J
29	(5.6)J	(5.6)J	5.3	4.7	4.3	3.8	3.8	(7.0)	10.0H	10.6	11.1	(11.4)	12.6*	(12.5)J*	(12.8)J*	[12.4]C*	(11.8)*	(11.2)J	[9.9]C	(8.1)	(6.4)J	(6.2)	(5.8)	5.5
30	(5.5)J	5.4	5.3	5.2	5.2	4.9	4.7	7.1	9.0	10.1	10.7	11.4	11.6*	C	C	(11.5)	(11.3)	[10.3]C	8.7	(7.4)	6.8	(6.2)	(5.7)	(5.1)J
31	5.0	4.7	4.8	4.4	3.7	3.1F	3.6	6.9	(10.0)	[10.0]C	10.9	11.5	(12.9)J*	(12.9)J*	C	C	C	C	C	(9.0)J	[8.0]C	7.2	(6.8)	(6.2)
Median	5.4	5.4	5.3	4.8	4.4	3.8	4.6	7.1	(9.0)	(10.0)	10.4	11.4	11.5	11.5	11.4	(11.3)	(11.0)	(10.2)	(8.9)	(7.7)	(7.0)	(6.4)	(6.0)	(5.7)
Count	28	27	27	26	26	25	28	26	26	25	24	25	26	22	19	21	16	11	11	18	24	27	26	26

Sweep 0.75 Mc to 11.5 Mc in 3.4 min

Manual ☐ Automatic ☒

* Starred values obtained by addition on October 28 of a top band to recorder, extending the sweep to 16.0 Mc.

U. S. GOVERNMENT PRINTING OFFICE 1946 O - 702519

TABLE 66

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C

Form adopted June 1946

IONOSPHERIC DATA

f°F2 (Characteristic), Mc (Unit), October (Month), 1946

Observed at Washington, D. C.

Lat 39.0°N, Long 77.5°W

75° W Mean Time

National Bureau Of Standards (Institution)

Scaled by A. M. B., J. L. S.

Calculated A. M. K., B. W. D

Day	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330
1	4.4	4.1 F	3.5	3.2 F	(2.0) F	2.1	[5.5] C	[7.0] C	(8.6)	[9.3] C	9.8	10.2	10.6	(10.6) J	10.2	(10.0)	10.2	C	C	C	(6.8)	5.9	5.2	5.0
2	4.9	4.9	4.6	3.8 F	3.5 F	3.5 F	6.0	8.0	8.8	9.6	(10.5) J	(11.2)	(11.4)	(11.5)	11.2	11.3	(10.6) J	C	C	C	7.8	6.0	6.1	6.0
3	5.8	5.2	5.2	5.0	5.0	4.6 F	6.0	8.0	9.1	9.5	10.7	11.0	(11.2)	11.4	10.9	10.1	9.7	(9.2)	8.0	(7.6)	6.8	6.8	6.1	(5.7)
4	(5.6)	5.5	5.5	(5.3) J	4.4	C	C	C	C	9.3	10.0	(10.3) J	10.8	11.0	(11.5)	(11.2)	(10.2)	[9.7] C	[8.7] C	7.0	(6.5) J	(6.2)	[5.8] C	[5.5] C
5	5.3	(5.6) J	5.5	4.3	3.5	3.3	5.6	7.7	[8.8] C	9.6	9.0	(10.6) J	11.5	11.3	11.1	(10.6) J	10.0	(9.0)	8.0	(7.4)	6.6	6.0	(5.6)	5.4
6	5.4	5.2	5.2	4.5	3.5	3.3	(5.5) J	7.2	[8.8] C	9.1	9.7	10.0	10.8	(10.4) J	11.0	11.0	(10.7)	[9.7] C	8.5	(7.2)	(6.3) J	(6.3) J	(5.9) J	(5.8) J
7	5.7	4.9	4.4	4.6	4.1	3.7	(5.7) J	8.4	8.5	C	C	C	C	C	C	11.0	(10.4) J	(9.6)	[8.2] C	[7.1] C	(6.4) J	5.9	5.9	5.6
8	5.0	5.0	4.7	4.0 F	3.8 F	3.7 F	(5.8) J	8.0	[8.4] C	9.0	(10.4) J	10.9	10.2	11.0	11.0	(10.4) J	C	C	(7.7) J	(7.0) J	(6.6) J	(6.0) J	(5.9) J	5.3
9	5.3	5.0	4.2	4.6 F	3.8 F	2.9 F	4.8	6.2	7.6	9.1	(10.0) J	11.0	11.0	10.9	10.8	10.2	[9.3] C	[7.6] C	(7.8) J	7.3	(6.4) J	[6.2] C	(5.7)	5.6
10	5.0	4.8	4.7	3.8	3.3	2.9	5.3	8.0	(9.2) J	9.6	10.1	11.2	11.2	(11.5)	11.2	11.0	(10.4) J	[9.7] C	(9.0)	(7.6) J	6.7	(6.6) J	5.8	5.4
11	5.3	5.2	4.9	4.2 F	(4.0) J	3.7	5.6	(8.2)	(8.9) J	(10.5) J	(11.5)	(11.2)	(11.4)	(11.5)	[11.5] C	[11.4] F	C	C	(8.5)	(7.4) J	6.5	(5.7)	(5.4) J	(5.5) J
12	5.2	5.0	4.9	5.0	(4.5)	3.8	5.3	(7.4)	(9.0)	9.9	(10.4) J	10.7	C	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
15	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	C	C	C	C	C	C	(6.1)	(5.9)	(5.8)
16	5.6	5.7	(5.3)	5.2	5.1	4.9	(7.1)	[8.5] C	[10.0] C	[11.0] C	(11.5)	D	D	D	D	C	C	C	8.4	[7.5] C	(6.6)	(6.4) J	(6.2)	(6.2) J
17	6.1	(5.8) J	(5.7) J	5.1	5.0	4.9	(7.0)	(8.7)	(9.6) J	D	D	11.5	D	D	C	C	C	C	C	[7.2] C	[6.4] C	[6.3] A	(6.0)	5.7
18	6.0	5.9	5.8	(5.6) J	5.0	4.4	6.0	(8.2)	(9.2)	C	C	C	C	C	C	C	C	C	C	C	C	(6.4)	(6.1) J	(6.1) J
19	(5.8) J	(5.6)	5.2	4.9	4.3	4.3	6.2	(9.0)	[10.2] C	[11.0] C	[11.3] C	[11.5] D	[11.5] D	(11.6)	C	D	C	C	C	C	C	C	C	C
20	6.4	5.2	(4.9) J	(4.9) J	(4.7) J	(4.5) J	6.6	[9.5] C	(11.2)	D	D	D	D	D	D	C	C	C	C	C	(6.6) J	[6.3] C	[6.0] C	[5.7] C
21	[5.2] C	(5.7) J	[5.2] C	[4.6] C	(3.8) F	3.2 F	5.5	[9.0] C	10.8	11.5	(11.5)	D	D	C	D	C	C	C	C	8.2	6.9	(6.4) J	(6.2) J	(5.6) J
22	(5.8) J	(6.0) J	(5.4) J	C	C	C	(6.4)	(9.0) J	(10.3)	(11.1)	D	D	C	C	D	D	C	C	C	(8.2)	(6.9) J	[6.1] C	[5.8] C	[5.5] C
23	(5.5)	(5.5)	(5.2) J	5.0	5.0	4.9	6.4	(8.8) J	11.0 M	C	C	C	D	C	C	C	C	C	C	[7.4] C	[6.9] C	C	C	C
24	C	C	C	C	C	C	C	C	C	C	C	D	D	C	C	C	C	C	C	C	[7.6] C	[6.7] C	[6.4] C	[6.4] C
25	(6.3)	[5.5] C	[5.4] C	5.1	(4.6) F	4.8	6.1	[8.5] C	C	C	C	C	C	C	C	C	C	C	C	(7.9) J	7.0	(7.1)	[6.9] C	[6.8] C
26	6.8	[6.4] C	(5.8) J	(5.6) J	(5.3)	(5.7) J	6.9	[8.6] C	[10.5] C	C	C	C	D	C	C	[11.1] C	[10.9] C	[10.2] C	[8.5] C	[7.1] C	[6.0] C K	[3.8] C K	[3.4] C K	[4.0] C K
27	(3.5) K	[3.4] C K	[3.6] C K	[3.6] C K	(2.9) F K	2.6 F K	4.3	[6.5] C	[7.7] C	[8.8] C	[9.9] C	[10.8] C	10.9	[11.2] C	[11.3] C	C	C	C	C	[6.5] C	[5.5] C	[5.1] C	[5.0] C	[4.7] C
28	4.5	[3.5] C	[3.6] C	3.8	2.3 F	2.4 F	4.9	[8.0] C	[10.0] C	[11.0] C	C	C	D	[3.4] C K	[3.6] C K	[3.3] C K	[11.4] C	[9.2] C	[8.1] C	[7.3] C	[6.7] C	[6.2] C	[5.8] C	[5.6] C
29	5.7	[5.5] C	[5.0] C	4.4	4.0	3.7	5.0	[8.8] C	[10.3] C	[10.8] C	[11.2] C	[11.8] C K	[12.6] C K	[12.7] C K	[12.7] C K	[12.1] C K	[11.5] C	[10.5] C	[9.1] C	[7.2] C	[6.3] C	[6.0] C	[5.6] C	[5.5] C
30	5.3	[5.4] C	[5.2] C	(5.8)	5.0	4.7	5.7	[8.1] C	(9.9)	[10.3] C	[11.0] C	[11.5] C	C	C	C	[11.4] C	[10.8] C	[9.6] C	[8.1] C	[7.1] C	[6.6] C	[6.0] C	[5.4] C	[5.0] C
31	[4.9] C	[4.7] C	[4.6] C	(4.0)	(3.2) F	3.1 F	4.9	[8.5] C	9.8	[10.2] C	[10.8] C	[12.2] C K	[12.2] C K	C	C	C	C	C	C	[8.5] C	[7.5] C	[7.0] C	[6.5] C	[6.1] C
Median	5.4	5.2	5.2	4.6	4.0	3.7	5.7	(8.2)	(9.2)	10.0	(10.7)	11.2	11.5	(11.5)	11.4	(11.1)	(10.4)	(9.6)	(8.3)	(7.3)	(6.6)	(6.2)	(5.9)	(5.6)
Count	27	27	27	26	26	26	26	26	25	22	21	22	22	17	18	17	13	11	14	21	25	26	26	26

Sweep 0.75 Mc to 11.5 Mc in 3.4 min

Manual ☐ Automatic ☒

✱ Starred values obtained by addition on October 28 of a top band ta recorder, extending the sweep to 16.0 Mc.

U. S. GOVERNMENT PRINTING OFFICE 1946 O - 702

TABLE 67

Central Radio Propogation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

h'F1 (Characteristic), km (Unit), October (Month), 1946

National Bureau Of Standards (Institution)

Observed at Washington, D.C.

Lat 39.0° N, Long 77.5° W

75° W Mean Time

Scaled by: A.K.B., J.L.S.

Calculated by: A.M.K., B.W.D.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1										C	200	[230]^{C}	220	[210]^{C}	220	230	240									
2										210	210	210	230	210	220	220	240									
3									220	220	190^{H}	200^{H}	200^{H}	210	210	220	230									
4									C	220^{H}	220	200^{H}	210^{H}	210^{H}	220	220										
5									220	220	[220]^{B}	[210]^{B}	210	220	220	220	210									
6									210	210^{H}	220	210	240	210	230	220	C									
7										C	C	C	C	C	C	C	220									
8									210	220	200	200	210^{H}	220	220	230	220									
9										220	220	210^{H}	210^{H}	220	220^{H}	230	230									
10										230	210^{H}	210	220	220	240	230										
11										C	230	210	A	A	A	C	A									
12									230	210	220	[220]^{A}	210	C	C	C	C									
13									C	C	C	C	C	C	C	C	C									
14									C	C	C	C	C	C	C	C	C									
15									C	C	C	C	C	C	C	240	230									
16									C	C	210	220	220	230	220	230										
17										230	230	[220]^{C}	220	220	230	A										
18										C	C	C	C	C	C	C										
19										A	220	220	[220]^{A}	[220]^{A}	230	A										
20										220	210	220	210	220												
21										230	*	210	C	C	C	C										
22									220	(210)	C	C	C	C	C											
23										C	C	C	210	C	C											
24											230	210	220													
25										C	C	C	C	C	C	C										
26											(240)	220	C	C	C											
27										230	(230)	[230]^{C}	230	230	230	230										
28										220	210^{H}	200^{H}	[220]$^{C}_{H}$		·											
29											210	*	220	220	220	230										
30									230	220	200	210	200^{H}	C	C											
31										B	220	220	220	220	220											
Median									220	220	220	210	220	220	220	230	230									
Count									7	16	22	22	21	16	15	13	8									

Sweep 0.75 Mc to 11.5 Mc in 3.4 min

Manual ☐ Automatic ☒

* No evidence of F1 layer appearing on record.

U.S. GOVERNMENT PRINTING OFFICE: 1948 O - 703518

TABLE 68

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

f°F1 (Characteristic), Mc (Unit), October (Month), 1946

Observed at Washington, D. C.

Lat. 39.0° N, Long. 77.5° W

75° W Mean Time

National Bureau Of Standards (Institution)

Scaled by: A.K.B., J.L.S.

Calculated by: A.M.K., B.W.D.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1										C	L	C	5.5	[4.9]C	4.8	L	L									
2										L	(4.9)	[5.0]H	(5.3)	(4.9)	4.9	L	L									
3									L	L	4.9H	5.1H	[4.8]H L	5.0	L	L	L									
4									C	L H	L	L H	(5.2)H	L H	L	L										
5									L	L	L	[5.0]L	[5.0]L	4.8	L	L	L									
6									L	L H	L	L	5.0	[4.7]L	L	L	L									
7										C	C	C	C	C	C	C	L									
8									L	L	L	L	L H	L	L	L	L									
9										L	L	[5.0]L H	[4.9]L H	(5.0)	L H	L	L									
10										L	L H	5.0	[5.0]L	5.0	L	L										
11										C	L	[4.8]L	(5.0)	A	A	C	A									
12									L	L	L	L	L	C	C	C	C									
13									C	C	C	C	C	C	C	C	C									
14									C	C	C	C	C	C	C	C	C									
15									C	C	C	C	C	C	C	L	L									
16									C	C	L	L	L	L	L	L										
17										L	L	C	L	L	L	L										
18										C	C	C	C	C	C	C										
19										L	L	L	L	A	L	L										
20										L	L	L	L	L												
21										L	*	L	C	C	C	C										
22									C	C	C	C	C	C	C											
23													L	C	C											
24											L	L	L													
25										C	C	C	C	C	C	C										
26											L	L	C	C	C											
27										L	L	L	L	L	L	L										
28										L	L H	L H	L H													
29											L	*	L	L	L	L										
30									L	L	(4.0)	L	L H	C	C											
31										L	L	L	L	L	L											
Median										L	L	(5.0)	(5.0)	4.9	L	L										
Count											3	6	9	7	2											

Sweep 0.75 Mc to 11.5 Mc in 3.4 min

Manual ☐ Automatic ☒

* No evidence of F1 layer appearing on record.

U. S. GOVERNMENT PRINTING OFFICE 1946 O - 702519

TABLE 69

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

h'E (Characteristic), km (Unit), October (Month), 1946

Observed at Washington, D. C.

Lat 39.0°N, Lang 77.5°W

75° W Mean Time

National Bureau Of Standards (Institution)

Scaled by: A.K.B., J.L.S.

Calculated by: A.M.K., B.W.D.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							c	c	110	[110]c	100	100	100	[100]c	110	120	110							
2							c	120	110	110	100	100	100	110	100	100	100	100						
3							c	110	110	110	110	110	110	110	110	110	110	120						
4							c	c	c	110	110	110	110	110	100	110	110	c						
5								110	100	110	[110]B	[110]B	110	110	110	110	100	110M						
6								110	100	110	100	100	110	100	100	110	110	c						
7								110M	110	c	c	c	e	e	e	e	110	(120)						
8								120	110	110	100	100	110	110	110	110	110M	120						
9								110	110	110	100	110	100	110	110	100	100	(100)						
10								110	100	100	100	100	100	100	100	110	100	100						
11							110	110	110	[110]c	110	100	110	100	100	[100]c	100	110						
12							c	110	110	100	100	100	100	c	c	c	c	c						
13							c	c	c	c	c	c	c	c	c	c	c	c						
14							c	c	c	c	c	c	c	c	c	c	c	c						
15							c	c	c	c	c	c	c	c	c	100	110	c						
16							c	120M	110	110	110	100	110	110	100	100	100	110						
17								120	110	110	100	100	110	110	110	110	110	100						
18								110M	110	c	c	c	c	c	c	c	100	100						
19							c	100	110	110	100	100	100	100	100	100	100	100						
20								120	100	100	100	100	100	100	100	100	110	110						
21								110	100	110M	100M	100M	100	[100]c	[100]c	[100]c	110	100						
22							c	110	110	100	100	100	[100]c	[100]c	[100]c	100	90	100						
23								(110)M	100	110	100	100	100	100	100	110	120	120						
24								c	c	110	110	100	100	110	(120)	110	120	120						
25								110	100	c	e	e	c	c	c	c	100							
26								110	110	110	110	110	110	[110]c	100	110	110M	c						
27								(130)	110	110	110	110	100	100	100	(120)	110	(120)						
28								(120)	110	110	110	110	100	100	100	120	120	100						
29								(100)	110	110	110	100	100M	110	110	100	120	c						
30								(120)	110	110	100	110	100	[100]c	[100]c	110	120	cM						
31								cM	110	[110]B	110	[110]B	110	110	110	120	120	c						
Median								110	110	110	100	100	100	105	100	110	110	110						
Count							1	24	26	25	25	25	25	24	24	25	28	19						

Sweep 0.75 Mc to 11.5 Mc in 3.4 min

Manual ☐ Automatic ☒

U. S. GOVERNMENT PRINTING OFFICE: 1948 O - 702319

TABLE 70

Central Radio Propogation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

f°E (Characteristic), Mc (Unit), October (Month), 1946

Observed at Washington, D. C.

Lat. 39.0° N, Long 77.5° W

75° W Mean Time

National Bureau (Institution)

Scaled by: A. K. B., J. L. S.

Calculated by: A. M. K., B. W. D.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							C	C	(2.9)	C	A	C	[3.7]C	[3.5]C	3.5	[3.3]C	[2.8]A							
2							C	2.3	2.8	[3.0]C	[3.2]C	C	C	C	C	C	2.6	2.2						
3							C	2.2	2.8	[3.1]C	(3.3)	C	C	C	C	C	2.7	2.2						
4							C	C	C	C	A	C	C	C	C	(2.9)	2.6	[1.9]C						
5								2.2	2.7	3.0	B	B	C	C	C	2.9	[2.5]A	1.9H						
6								(2.2)	2.7	(3.1)	3.2	[3.4]C	(3.5)	(3.4)	[3.2]C	(3.0)	(2.6)	C						
7								2.0H	2.6	C	C	C	C	C	C	C	2.5	(1.8)						
8								(2.2)	[2.7]A	(2.9)	[3.2]A	[3.4]C	[3.5]C	[3.4]C	[3.2]C	(2.9)	2.6H	1.8						
9								2.1	(2.5)	(3.0)	[3.3]C	[3.5]C	[3.5]C	3.4	(3.3)	2.9	2.5	A						
10								2.0	2.6	2.9	[3.2]C	[3.4]C	[3.5]C	C	C	A	A	A						
11							A	A	A	C	A	A	A	A	A	C	A	A						
12							C	(2.1)	[2.6]A	(2.9)	C	A	3.6	C	C	C	C	C						
13							C	C	C	C	C	C	C	C	C	C	C	C						
14							C	C	C	C	C	C	C	C	C	C	C	C						
15							C	C	C	C	C	C	C	C	C	C	2.6	1.8						
16							C	1.9H	(2.7)	C	C	A	C	C	C	C	[2.5]A	(2.0)						
17								2.2	2.8	C	C	C	C	C	C	A	A	A						
18								AH	(2.7)	C	C	C	C	C	C	C	(2.7)	A						
19							C	A	A	A	3.4	[3.5]A	A	A	A	A	(2.4)	A						
20								[2.1]A	2.8	[3.4]A	[3.5]A	3.5	3.5	3.5	3.3	3.1	(2.5)	A						
21								A	A	(3.1)H	(3.4)H	3.5H	C	C	C	C	C	(1.8)						
22							C	[1.9]A	2.3	C	C	C	C	C	C	[3.1]A	2.4	A						
23								1.8H	[2.6]C	[3.0]C	(3.3)	3.5	3.5	C	C	C	A	A						
24								C	C	3.1	3.4	3.6	3.5	(3.5)	C	A	A	A						
25								2.0	2.7	C	C	C	C	C	C	C	2.5							
26								2.1	2.7	(2.8)	C	C	C	C	C	2.9	2.4H	C						
27								2.0	C	C	C	C	(3.4)	(3.5)	[3.2]C	2.9	(2.5)	(1.8)						
28								1.9	[2.3]C	2.9	C	C	(3.4)	C	C	C	2.4	A						
29								2.0	(2.5)	(2.9)	3.3	3.4	3.5H	(3.5)	3.3	2.9	2.4	1.8						
30								(1.9)	2.6	2.9	[3.1]C	3.3	3.4	[3.4]C	[3.2]C	2.9	(2.4)	1.6H						
31								1.8H	2.5	[3.0]B	(3.3)	[3.4]B	3.5	3.5	[3.2]B	(2.8)	(2.4)	C						
Median								2.0	2.7	(3.0)	(3.3)	3.4	3.5	(3.5)	(3.2)	2.9	2.5	1.8						
Count								21	22	17	14	12	14	10	9	13	22	12						

Sweep 0.75 Mc to 11.5 Mc in 3.4 min

Manual ☐ Automatic ☒

U. S. GOVERNMENT PRINTING OFFICE: 1946 O - 783519

TABLE 71

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

Es (Characteristic), Mc, km (Unit) October (Month), 1946

Observed at Washington, D.C.

Lat. 39.0° N, Long. 77.5° W

75° W Mean Time

National Bureau Of Standards (Institution)

Scaled by: A. K. B., J. L. S.

Calculated by: A. M. K., B. W. D.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.3 110			2.9 120	3.9 120			C			3.8 100	3.8 120	3.8 100	3.6 140	3.7 140	3.8 120	2.9 120	C	C	C		1.7 130		2.3 110
2	2.3 110					4.0 110	2.3 110	4.0 100			3.8 100	5.3 100			3.8 100	3.7 120	3.6 120	3.7 100	2.3 100	2.3 100				
3						2.7 110	2.2 110	2.5 110				3.7 130					2.7 130	2.3 120						
4						C	C	C	C	3.8 110	3.5 110				3.8 120	3.9 120	2.5 100							
5								3.7 100	5.0 120	3.9 120				3.8 130			2.7 100		2.4 110	2.4 110	4.7 110	3.5 110	6.6 110	4.9 110
6	1.9 110	1.6 140		3.8 110	5.5 100	3.8 110	2.9 110	2.8 100			3.6 120	5.0 120	3.8 120	3.7 130	3.8 120				2.3 100	2.3 100	2.3 90		2.4 100	
7		2.3 140	2.3 130	2.7 90	4.0 110	2.3 110	2.6 100	2.6 90		C	C	C	C	C	C	C		2.2 140		2.1 100		2.3 100		
8						2.4 100	3.9 120	2.7 130	2.7 110	2.9 120	3.8 110		3.8 110	5.0 110		2.9 140	2.6 130	2.1 120			2.8 100			
9					2.3 90		2.3 110	2.7 110			3.8 120	3.7 120		3.9 110		3.8 110	3.8 100	2.4 100	2.3 100	2.3 100	2.3 110	2.8 100	3.5 110	4.9 100
10	4.1 100		2.4 110		2.9 100	2.9 110	3.7 100	2.3 100	5.1 100	4.0 100	3.8 100	3.8 110		5.3 100	3.9 100	5.2 100	(4.2) 110	2.4 100	2.4 100	2.4 100	2.0 120	2.9 100	4.3 110	2.4 110
11	2.3 110	2.9 110	2.8 100	2.9 100	2.3 110	2.3 100	5.7 110	5.5 110	5.3 110	4.9 110	5.3 110	6.1 110	(6.8) 100	5.5 100	6.0 100	5.3 100	5.3 100	4.2 100	3.5 100	4.2 100	3.5 100	2.3 100	2.8 100	2.8 100
12	2.3 100		2.3 100		2.9 100	3.8 100	2.3 110	3.2 100	3.8 110	5.0 130	5.0 100	5.2 100	3.5 100	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
14	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	5.0 100	C	C	C	C	C
15	2.9 100	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	2.8 130	2.1 120	2.3 120	(3.0) 110			2.3 110	
16		2.3 110			2.7 100	2.2 120		5.1 100	(2.9) 120		3.9 110	3.8 110				3.2 120	5.3 110	3.7 110	(3.0) 110	(2.9) 110				7.2 110
17	2.2 100	2.2 100	2.2 100	2.2 110	2.7 100	2.8 110	2.7 100		2.9 120						3.1 100	5.2 110	4.5 110	4.1 110	3.5 100	3.1 100	5.7 100	7.1 110	6.9 110	2.3 100
18	3.5 100	3.6 100	3.5 100	4.3 100	3.7 100	3.6 110	5.3 100	(4.0) 100	7.4 100	C	C	C	C	C	C	C		5.3 100	(3.7) 100	(3.5) 110	(3.4) 100	3.5 100	3.5 100	(2.3) 100
19	2.4 100	3.1 100	(2.7) 100	(2.7) 100	(3.3) 100	(2.3) 100	(5.3) 100	5.3 110	4.1 110	5.3 110	5.1 100	5.6 100	7.4 100	6.8 100	5.1 100	(5.0) 100	(4.0) 100	(3.5) 100	(3.0) 100	(2.7) 110	1.8 110	(2.2) 120		
20				(2.4) 100	2.3 100	(1.8) 120		2.6 100	5.1 110	4.7 100	4.2 110					5.0 130	3.2 110	(2.4) 100	(3.5) 100	(3.5) 100	5.1 100	3.2 100		2.3 100
21	(3.2) 100	(2.8) 100	(2.9) 100	(3.7) 100	(3.2) 110	(2.3) 110	(4.8) 100	4.2 110	6.4 100	4.1 110	3.9 110			C	C	C	(2.3) 120	(2.7) 100	(2.3) 100	(2.9) 100	(2.9) 100	(2.9) 100	(2.9) 100	2.8 100
22	(2.9) 100	2.9 100	(2.9) 100	(2.9) 100	(2.9) 110	2.7 100	2.7 100	(2.9) 110	(2.9) 110		(4.4) 100		C	C	3.5 100	3.0 130	2.8 120	2.7 100	(2.4) 90	(2.4) 100			(2.2) 100	C
23	(2.7) 100	3.4 100	(2.8) 100	2.3 100	(2.2) 100			2.8 100	2.9 110	C	C	3.8 100			3.6 120	3.5 110	(2.9) 110	2.5 110	(2.4) 110	(2.8) 110	2.7 110	2.7 120	C	C
24	C	C	C	C	C	C	C	C	C	C	C		3.9 120	3.9 130	3.9 120	5.0 120	3.8 120	(3.9) 120	(3.7) 110	6.6 110	5.2 110	C	C	C
25	3.6 110	3.2 110	3.3 110	3.0 100	2.3 100		2.7 100	(2.7) 90	3.1 100	C	C	C	C	C	C	C	C	1.8 100	C	3.5 110	1.8 110	C	C	C
26		C		2.4 100	2.3 110		2.9 100	2.9 120	2.8 110	C	C	C		C	C	C	C	C	C	C	C	C	2.2 200	C
27	3.3 100	C	C	C				2.5 110	C	C	C	C	3.6 90	C	C	2.9 90	C	(2.9) 100	C	C	C	C	(3.5) 100	C
28	3.1 100	C	C	1.4 110	2.6 100		3.5 150	2.3 100	C	C	C	C		C	C	C	2.0 100	1.9 100	2.9 100	2.7 100	C	2.3 100	2.5 100	C
29	2.8 100	2.9 110	2.9 100	2.7 100	2.4 100	2.9 100	2.9 100	2.2 100	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
30		C	C				3.6 110	C		C	C	C	C	C	C	C	C	C	C	1.9 120	C	C	C	C
31	(2.4) 120	C	2.3 120					2.2 100	5.1 120	C	5.2 130	3.7 130	3.6 130	4.0 130	3.9 120	3.3 120	C	C	-	C	C	C	C	C
Median	2.3	1.9	2.2	2.2	2.3	2.3	2.7	2.8	2.9	2.9	3.8	3.7	**	3.7	3.6	3.7	2.8	2.4	2.4	2.7	2.2	2.3	2.2	2.3
Count	28	22	24	26	27	26	26	24	23	17	18	20	22	17	18	19	22	23	22	23	22	21	22	18

Sweep 0.75 Mc to 11.5 Mc in 3.4 min

Manual ☐ Automatic ☒

** Median fE_s less than median $f°_E$.

U. S. GOVERNMENT PRINTING OFFICE 1946 O - 702519

TABLE 72

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

F2-MI500 (Characteristic), ____ (Unit), October (Month), 1946

National Bureau Of Standards (Institution)

Observed at Washington, D.C.

Lat 39.0° N, Long 77.5° W

75° W Mean Time

Scaled by: A.K.B., J.L.S.

Calculated by: A.M.K., B.W.D.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1.7	c	(1.7)	1.7	A	1.7F	(2.0)	c	c	c	2.0	c	1.9	c	1.9	(1.9)	1.9	c	c	c	(1.9)	c	1.8	1.7
2	1.7	1.7	1.8	2.0	1.8F	c	2.0	2.2	2.2	2.0	1.9	1.9	(2.0)	(1.8)	1.9	(2.0)J	(2.0)J	c	c	c	(2.0)	(1.9)	1.8	1.8
3	1.7	1.7	1.7	1.7	1.8	1.8	(2.1)	2.2	2.2	2.0	1.9	2.0	1.9	(2.0)	1.9	(2.0)	2.0	(2.0)	(2.0)	1.9	(1.9)	1.9	(1.9)J	(1.8)J
4	(1.6)J	1.7	1.8	1.9	1.7	c	c	c	c	2.1	2.0	2.0	1.9	1.9	(1.9)	(1.9)	(2.0)J	(2.0)J	c	(2.0)J	(1.8)	(1.9)J	c	c
5	1.7	(1.8)J	1.9	2.0	1.9	1.9	1.8	2.2	2.2	(2.0)	(1.9)	c	(1.9)J	(2.0)	1.9	1.9	(2.0)	(2.1)	(2.0)	(1.9)J	1.9	1.9	(1.8)J	(1.7)J
6	(1.7)	1.8	1.9	1.9	1.9	1.8	1.8	2.2	2.2	c	(2.1)J	(1.9)	2.0	1.9	1.9	(1.9)	c	(2.0)J	c	(1.9)J	(1.9)	(1.9)J	(1.9)J	(1.9)J
7	1.9	2.0	1.8	1.8	1.9	1.9	2.0	2.3	(2.2)J	c	c	c	c	c	c	c	2.0	(2.0)J	c	(2.1)J	1.9	(1.9)J	1.8	1.9
8	1.9	1.9	2.0F	1.9	2.0F	2.0F	2.0	2.2	2.2	2.2	2.0	2.1	1.9	2.0	2.0	(2.0)J	c	c	c	(2.0)	(1.9)	(1.9)J	1.7	(1.7)
9	1.7	1.8	1.7	1.7	1.9	1.9F	2.0F	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	c	(2.1)	c	c	(1.9)J	(1.9)J	1.9	(1.8)
10	1.9	1.9	1.9	1.8	1.8	1.8	1.9	2.2	(2.2)	(2.1)J	2.1	2.0	(2.0)	(2.0)	(2.0)	(2.0)	c	c	c	(2.0)J	1.9	1.9	1.9	(1.9)
11	1.9	1.9	2.1	1.9	2.0	1.9	1.9	(2.2)	(2.2)	c	(2.1)	2.0	(2.0)	D	2.0	c	(2.1)	c	c	c	(2.0)	1.9	(1.8)	1.8
12	1.8	1.7	1.6	1.7	1.8	1.9	1.9	2.1	2.1	(2.0)	2.0	2.1	2.1	c	c	c	c	c	c	c	c	c	c	c
13	c	c	c	c	c	c	(2.1)	c	c	c	c	c	c	(2.1)	c	c.	c	c	c	c	c	c	c	c
14	(2.0)	c	c	c	c	c	(1.8)	c	c	c	c	c	(2.1)	c	c	c	c	c	c	c	c	c	c	c
15	(2.2)	c	c	c	c	c	(2.0)	c	c	c	c	c	(2.1)	c	c	D	c	c	c	c	c	(1.9)	(1.9)	(1.8)J
16	(1.9)	1.8	1.9	(1.7)J	c	1.8	1.9	(2.2)	(2.1)J	(2.1)J	2.0	D	D	D	D	D	c	c	c	c	(2.0)J	(1.9)	(1.9)	(1.9)J
17	1.9	(1.9)J	1.9	(1.9)	1.8	1.9	2.1	(2.2)	(2.1)	D	D	(2.0)	D	D	(2.0)	c	c	c	c	(2.0)	(1.9)	(1.9)J	A	1.7
18	1.8	(1.8)J	1.8	(2.0)J	2.0	1.9	1.9	(2.2)	(2.1)	c	c	c	c	c	c	c	c	c	c	c	c	(1.9)	(1.9)J	(1.9)J
19	(1.9)J	(1.8)J	(2.0)	(2.0)	1.9	1.8	1.8	(2.3)	c	(2.2)J	(2.0)	(2.0)	(1.9)	(1.9)	c	D	c	c	c	c	c	c	c	c
20	c	(1.6)J	(1.6)J	c	(1.7)	(1.8)J	1.9	(2.0)	c	D	D	D	D	D	D	c	c	c	c	c	c	c	c	(2.0)
21	c	(1.9)	(1.8)	(2.0)S	(1.9)F	(1.9)F	(1.9)F	(2.0)	c	c	(2.0)	D	D	c	c	c	c	c	c	c	(2.0)	1.9	c	c
22	c	c	c	c	c	c	c	2.3	2.2	2.0	2.0	D	c	c	c	D	D	c	c	c	(2.0)	(2.0)J	(1.9)	c
23	(1.9)J	(1.9)J	(1.8)	1.8	1.7	1.8	c	2.1	2.2	(2.1)	c	D	D	D	D	D	c	c	c	(2.2)	(2.0)	1.9	c	c
24	c	c	c	c	c	c	c	c	c	(2.1)	D	D	D	D	D H	D	D	c	c	c	(1.9)J	1.8	1.8	1.8
25	(1.7)J	(1.9)J	(1.8)J	(1.8)	2.0	1.8	2.0	(2.3)	2.1	c	c	c	c	c	c	c	c	c	c	c	c	c	c	(1.8)
26	1.7	1.8	(1.7)J	(1.7)J	(1.7)	1.7	(1.9)J	(2.1)	(2.1)	(2.0)	D	D	D	D	D	(2.0)	c	(2.1)	c	1.7	1.6K	(1.8)JK	(1.8)JL	1.9K
27	(1.6)K	(1.5)K	(1.7)JL	2.0L	(1.8)JL	(1.6)JL	1.6F	(1.8)J	(1.9)	2.0	(1.9)	(1.9)J	1.9	1.9	1.9	(2.0)	c	c	c	(1.9)	(1.9)	(1.9)J	(1.9)J	1.9
28	1.9	(1.8)F	1.8F	1.8F	(1.9)F	2.0F	1.8F	2.2	(2.1)J	(2.2)	(2.1)	1	D	2.0	1.9	1.9	2.0	c	c	(1.9)	(2.0)	1.9	(1.9)	(1.9)K
29	(1.9)J	(1.9)J	2.0	1.9	1.8	1.8	1.9	(2.1)	2.2	2.2	2.2	(2.1)	2.0	(2.0)J	(2.0)J	c	(2.1)	(1.9)J	c	(1.9)	(1.9)J	(1.9)	(1.8)	1.9
30	(1.8)J	1.8	1.8	1.8	1.9	1.8	2.0	2.2	2.1	2.2	2.0	2.0	1.9	c	c	(2.1)	(2.0)	c	1.9	(2.0)	1.9	(1.9)	(2.1)	(2.0)J
31	1.9	1.9	2.0	2.0	2.0	1.7F	1.9	2.1	(2.3)	c	2.1	1.9	(1.9)J	(1.9)J	c	c	c	c	c	(2.0)J	c	1.7	1.8	(1.8)
Median	1.8	1.8	1.8	1.9	1.9	1.8	1.9	2.2	2.2	2.1	2.0	2.0	2.0	2.0	1.9	(2.0)	(2.0)	(2.0)		(2.0)	(1.9)	(1.9)	(1.9)	(1.8)
Count	26	25	26	25	24	24	27	25	22	18	20	15	18	14	14	13	10	8	3	15	22	24	21	23

Sweep 0.75 Mc to 11.5 Mc in 3.4 min

Manual ☐ Automatic ☒

U.S. GOVERNMENT PRINTING OFFICE 1946 O - 702516

TABLE 73

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

F2-M3000, (Characteristic) ____ (Unit) October (Month), 1946

Observed at Washington, D. C.

Lat 39.0° N, Long 77.5° W 75° W Mean Time

National Bureau Of Standards (Institution)

Scaled by: A.K.B., J.L.S

Calculated by: A.M.K., B.W.D.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.7	C	(2.6)	2.6	A	2.6 F	(3.0)	C	C	C	3.0	C	2.8	C	2.9	(2.8)	2.8	C	C	C	(2.8)	C	2.7	2.6
2	2.6	2.7	2.8	3.0	2.8 F	C	3.0	3.2	3.2	3.0	2.9	2.9	(2.9)	(2.8)	2.9	(3.0) J	(3.0) J	C	C	C	(3.0)	(2.9)	2.7	2.7
3	2.6	2.5	2.6	2.6	2.7	2.8	(3.1)	3.2	3.2	3.0	2.9	3.0	2.9	(3.0)	2.9	(2.9)	3.0	(3.0)	(3.0)	2.8	(2.8)	2.8	(2.8) J	(2.7) J
4	(2.5) J	2.6	2.7	2.8	2.7	C	C	C	C	3.1	3.0	3.0	2.9	2.9	(2.8)	(2.9)	(3.0) J	(3.0) J	C	(3.0) J	(2.7)	(2.8) J	C	C
5	2.7	(2.7) J	2.9	2.9	2.9	2.8	2.8	3.2	3.2	(3.0)	(2.9)	C	(2.8) J	(2.9)	2.9	2.9	(3.0)	(3.1)	(3.0)	(2.9) J	2.9	2.8	(2.8) J	(2.7) J
6	(2.7)	2.8	2.8	2.9	2.9	2.8	2.8	3.3	3.2	C	(3.1) J	(2.9)	3.0	2.9	2.9	(2.9)	C	(3.0) J	C	(2.9) J	(2.9)	(2.8) J	(2.8) J	(2.8) J
7	2.9	3.0	2.7	2.8	2.8	2.8	3.0	3.3	(3.2) J	C	C	C	C	C	C	C	3.0	(3.0) J	C	(3.1) J	2.9	(2.9) J	2.8	2.8
8	2.9	2.9	3.0 F	2.9	3.0 F	3.0 F	3.0	3.2	3.2	3.2	3.0	3.1	2.9	3.0	3.0	(3.0) J	C	C	C	(3.0)	(2.9)	(2.9) J	2.7	(2.7)
9	2.7	2.8	2.5	2.6	2.8	2.9 F	3.0 F	3.2	3.1	3.1	3.0	3.0	3.0	3.0	3.0	3.0	C	(3.1)	C	C	(2.9) J	(2.8) J	2.9	(2.8) J
10	2.9	2.8	2.9	2.8	2.8	2.8	2.9	3.2	(3.2)	(3.1) J	3.1	3.0	(3.0)	(3.0)	(3.0)	(2.9)	C	C	C	(3.0) J	2.9	2.9	2.9	(2.8)
11	2.8	2.9	3.1	2.9	3.0	2.9	2.9	(3.2)	(3.2)	C	(3.1)	3.0	(3.0)	D	3.0	C	(3.2)	C	C	C	(3.0)	2.9	(2.8)	2.7
12	(2.7)	2.6	2.5	2.7	2.8	2.9	2.9	3.1	3.1	(3.0)	3.0	3.1	3.1	C	C	C	C	C	C	C	C	C	C	C
13	C	C	C	C	C	C	(3.1)	C	C	C	C	C	C	(3.1)	C	C	C	C	C	C	C	C	C	C
14	(3.0)	C	C	C	C	C	(2.8)	C	C	C	C	C	(3.1)	C	C	C	C	C	C	C	C	C	C	C
15	(3.2)	C	C	C	C	C	(3.0)	C	C	C	C	C	(3.1)	C	C	D	C	C	C	C	C	(2.9)	(2.9)	(2.8) J
16	(2.8)	2.8	2.9	(2.6) J	C	2.8	2.9	(3.3)	(3.2) J	(3.1) J	3.0	D	D	D	D	D	C	C	C	C	(3.0) J	(2.8)	(2.8)	(2.9) J
17	2.8	(2.8) J	2.8	(2.9)	2.8	2.9	3.1	(3.3)	(3.1)	D	D	(3.0)	D	D	(3.0)	C	C	C	C	(3.0)	(2.9)	(2.9) J	A	2.6
18	2.7	(2.8) J	2.8	(3.0) J	3.0	2.9	2.9	(3.2)	(3.1)	C	C	C	C	C	C	C	C	C	C	C	C	(2.9)	(2.9) J	(2.9) J
19	(2.9) J	(2.8) J	(3.0)	(3.0)	2.8	2.7	2.8	(3.3)	C	(3.2) J	(3.0)	(3.0)	(2.9)	(2.9)	C	D	C	C	C	C	C	C	C	C
20	C	(2.5) J	(2.5) J	C	(2.6)	(2.7) J	2.8	(3.0)	C	D	D	D	D	D	D	C	C	C	C	C	C	C	C	(2.9)
21	C	(2.8)	(2.7)	(3.0) F	(2.8) F	(2.9) F	(2.8) F	(3.0)	C	C	(3.0)	D	D	C	C	C	C	C	C	C	(3.0)	2.9	C	C
22	C	C	C	C	C	C	C	3.3	3.2	3.0	3.0	D	C	C	C	D	D	C	C	C	(3.0)	(3.0) J	(2.8)	C
23	(2.8) J	(2.9) J	(2.8)	2.7	2.6	2.7	C	3.1	3.2	(3.1)	C	D	D	D	D	D	C	C	C	(3.2)	(3.0)	2.9	C	C
24	C	C	C	C	C	C	C	C	C	(3.1)	D	D	D	D	D N	D	D	C	C	C	(2.9) J	2.7	2.8	2.7
25	(2.5) J	(2.8) J	(2.7) J	(2.8)	2.9	2.7	2.9	(3.3)	3.1	C	C	C	C	C	C	C	C	C	C	C	C	C	C	(2.7)
26	2.6	2.7	(2.7) J	(2.6) J	(2.5)	2.6	(2.9) J	(3.2)	(3.1)	(3.0)	D	D	D	D	D	(3.0)	C	(3.1)	C	2.6	2.5 K	(2.7) J K	(2.7) F K	2.8 K
27	(2.5) K	(2.3) K	(2.6) F K	3.0 F K	(2.7) F K	(2.4) F K	2.4 F	(2.8) J	(2.9)	3.0	(2.9)	(2.9) J	2.9	2.9	2.9	(3.0)	C	C	C	(2.8)	(2.8)	(2.9) J	(2.9)	2.8
28	2.8	(2.7) F	2.8 F	2.7 F	(2.9) F	3.0 F	2.8 F	3.2	(3.1) J	(3.2)	(3.1)	D	D	3.0	2.9	2.9	3.0	C	C	(2.9)	(2.9)	2.8	(2.9)	(2.9) J
29	(2.9) J	(2.8) J	2.9	2.8	2.8	2.8	2.8	(3.1)	3.2 H	3.3	3.2	(3.1)	3.0	(3.0) J	(3.0) J	C	(3.1)	(2.9) J	C	(2.9)	(2.9) J	(2.8)	(2.8)	2.8
30	(2.7) J	2.7	2.7	2.7	2.8	2.8	2.9	3.2	3.1	3.2	3.0	3.0	2.9	C	C	(3.1)	(3.1)	C	2.9	(3.0)	2.9	(2.9)	(2.9)	(3.0) J
31	2.9	2.9	3.0	3.0	3.0	2.7 F	2.9	3.1	(3.3)	C	3.1	2.9	(2.8) J	(2.8) J	C	C	C	C	C	(3.0) J	C	2.7	(2.7)	(2.7)
Median	2.8	2.8	2.8	2.8	2.8	2.8	2.9	3.2	3.2	3.1	3.0	3.0	2.9	(3.0)	2.9	(2.9)	(3.0)	(3.0)		(3.0)	(2.9)	(2.9)	(2.8)	(2.8)
Count	26	25	26	25	24	24	27	25	22	18	20	15	18	14	14	13	10	8	3	15	22	24	21	23

Sweep 0.75 Mc to 11.5 Mc in 3.4 min

Manual ☐ Automatic ☒

U. S. GOVERNMENT PRINTING OFFICE 1948 O - 703519

TABLE 74

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

F1-M3000 (Characteristic), _____ (Unit), October (Month), 1946

National Bureau Of Standards (Institution)

Observed at Washington, D. C.

Lat. 39.0° N, Long. 77.5° W — 75° W Mean Time

Scaled by: A.K.B., J.L.S.

Calculated by: A.M.K., B.W.D.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1										C	L	C	3.5	C	(3.6)	L	L							
2										L	(3.7)	L	(3.8)	(3.7)	(3.7)	L	L							
3									L	L	3.6 H	(3.6) H	L H	3.7	L	L	L							
4									C	L H	L	L H	(3.7) H	L H	L	L								
5									L	L	L	L	L	(3.7)	L	L	L							
6									L	L H	L	L	(3.7)	L	L	L	L							
7										C	C	C	C	C	C	C	L							
8									L	L	L	L	L H	L	L	L	L							
9										L	L	L H	L H	(3.8)	L H	L	L							
10										L	L H	3.8	L	3.7	L	L								
11										C	L	L	(3.8)	A	A	C	A							
12									L	L	L	L	L	C	C	C	C							
13									C	C	C	C	C	C	C	C	C							
14									C	C	C	C	C	C	C	C	C							
15									C	C	C	C	C	C	C	L	L							
16									C	C	L	L	L	L	L	L								
17										L	L	C	L	L	L	L								
18										C	C	C	C	C	C	C								
19										L	L	L	L	A	L	L								
20										L	L	L	L	L										
21										L	*	L	C	C	C	C								
22									C	C	C	C	C	C	C									
23													L	C	C									
24											L	L	L											
25										C	C	C	C	C	C	C								
26											L	L	C	C	C									
27										L	L	L	L	L	L	L								
28										L	L H	L H	L H											
29											L	*	L	L	L	L								
30									L	L	(3.9)	L	L H	C	C									
31										L	L	L	L	L	L									
Median										L	L	L	(3.7)	(3.7)	L	L								
Count											3	2	5	5	2									

Sweep 0.75 Mc to 11.5 Mc in 3.4 min

Manual ☐ Automatic ☒

* No evidence of F1 layer appearing on record.

U. S. GOVERNMENT PRINTING OFFICE: 1948 O - 703949

TABLE 75

Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Form adopted June 1946

IONOSPHERIC DATA

E-M1500 (Characteristic), _____ (Unit), October (Month), 1946

Observed at Washington, D.C.

Lat 39.0° N, Long 77.5° W

75° W Mean Time

National Bureau Of Standards (Institution)

Scaled by: A.K.B., J.L.S.

Calculated by: A.M.K., B.W.D.

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							C	C	(4.0)	C	A	C	C	C	4.0	C	A	C						
2							C	3.8	4.0	C	C	C	C	C	C	C	(3.9)	(4.1)						
3							C	3.9	4.0	C	(4.1)	C	C	C	C	C	4.0	4.1	C					
4							C	C	C	C	A	C	C	C	C	(4.2)	(4.0)	C						
5								3.8	4.0	4.0	B	B	C	C	C	4.3	A	3.7^{H}						
6								(3.7)	3.9	(4.0)	4.0	C	(4.1)	(4.0)	C	(4.0)	(4.1)	C						
7								(4.0)^{H}	3.9	C	C	C	C	C	C	C	4.0	(4.0)						
8								(3.9)	A	(4.0)	A	C	C	C	C	(4.0)	(4.0)^{H}	4.2						
9								4.0	(4.2)	(4.0)	C	C	C	4.0	(4.0)	4.1	4.1	A						
10								4.0	3.9	4.0	C	C	C	C	C	A	A	A						
11							A	A	A	C	A	A	A	A	A	C	A	A						
12							C	(3.9)	A	(4.1)	C	A	4.1	C	C	C	C	C						
13							C	C	C	C	C	C	C	C	C	C	C	C						
14							C	C	C	C	C	C	C	C	C	C	C	C						
15							C	C	C	C	C	C	C	C	C	C	4.0	4.1						
16							C	4.1^{H}	(4.0)	C	C	A	C	C	C	C	A	(4.0)						
17								4.0	4.0	C	C	C	C	C	C	A	A	A						
18								A^{H}	(4.2)	C	C	C	C	C	C	C	(4.0)	A						
19							C	A	A	A	4.1	A	A	A	A	A	(4.1)	A						
20								A	4.0	A	A	4.0	4.1	4.0	4.0	4.2	(4.0)	A						
21								A	A	(4.1)^{H}	(4.0)^{H}	3.9^{H}	C	C	C	C	C	(4.3)						
22							C	A	4.2	C	C	C	C	C	C	A	(4.1)	A						
23								4.0^{H}	C	C	(4.1)	3.8	4.1	C	C	C	A	A						
24								C	C	4.1	3.9	4.0	4.0	(4.1)	C	A	A	A						
25								4.0	4.0	C	C	C	C	C	C	C	4.2							
26								3.9	3.9	(4.2)	C	C	C	C	C	4.3	4.0^{H}	C						
27								4.0	C	C	C	C	(4.0)	(3.9)	C	(4.0)	(3.9)	(4.1)						
28								3.9	C	4.1	C	C	(4.0)	C	C	C	4.1	A						
29								A	(3.9)	(4.1)	4.1	4.0	4.2^{H}	(4.0)	4.1	4.1	4.0	C						
30								(4.0)	4.0	4.0	C	4.1	4.0	C	C	3.9	(4.0)	C^{H}						
31								3.7^{H}	4.0	B	(4.0)	B	4.0	4.0	B	(4.1)	(4.1)	C						
Median								4.0	4.0	4.0	4.0	4.0	4.0	(4.0)	*	4.1	(4.0)	(4.1)						
Count								18	18	12	8	6	10	7	*	11	19	9						

Sweep 0.75 Mc to 11.5 Mc in 3.4 min

Manual ☐ Automatic ☒

* Insufficient data for computing median values.

U. S. GOVERNMENT PRINTING OFFICE 1946 O - 703519

Table 76

Ionospheric Storminess, October 1946

Day October	Ionosphere Character* 00-12 GCT	12-24 GCT	Principal Storms Beginning GCT	End GCT	Geomagnetic Character** 00-12 GCT	12-24 GCT
1	2	1			3	3
2	2	2			2	2
3	2	2			2	2
4	1	2			2	2
5	1	2			2	3
6	1	1			3	3
7	0	***			3	2
8	1	1			1	2
9	2	2			4	3
10	1	1			2	2
11	1	1			2	2
12	2	***			2	1
13	***	***			1	1
14	***	***			1	1
15	***	***			1	2
16	1	2			2	2
17	0	2			1	1
18	1	***			1	1
19	0	2			0	2
20	1	2			3	3
21	1	2			1	2
22	1	2			2	1
23	1	2			2	1
24	***	1			1	2
25	1	***			2	1
26	1	2			3	3
27	4	3	0100	1100	5	4
28	2	0			2	1
29	1	1			2	1
30	1	2			1	1
31	1	2			2	3

*Ionosphere Character figure (I-figure) for ionospheric storminess at Washington, D.C., during 12-hour period, on an arbitrary scale of 0 to 9, 9 representing the greatest disturbance.

**Average for 12 hours of American magnetic K-figure, determined by a number of observatories, on an arbitrary scale of 0 to 9, 9 representing the greatest disturbance.

***No readable record. Refer to Table 65 for detailed explanation.

Table 77

Sudden Ionosphere Disturbances Observed at Washington, D. C.

Day	GCT Beginning	GCT End	Location of Transmitters	Relative Intensity at minimum*	Other Phenomena
October 5	1421	1620	Ohio, D.C., Chile, England, Mexico, Ontario	0.02	Terr.mag. pulse** 1420-1535
13	1533	1750	Ohio, D.C., Mexico, New York, Ontario	0.05	
17	1550	1640	Ohio, D.C., Chile, England, Mexico, Ontario	0.05	
26	1749	1820	Ohio, D.C., Chile, England, Mexico, New York, Ontario	0.03	Terr.mag. pulse** 1750-1805
31	1600	1620	Ohio, D.C., Mexico, Ontario	0.1	

*Ratio of received field intensity during SID to average field intensity before and after, for station W8XAL, 6080 kilocycles, 600 kilometers distant.
**As observed on Cheltenham magnetogram of the United States Coast and Geodetic Survey.

Table 78

Sudden Ionosphere Disturbances Reported by Engineer-in-Chief Cable and Wireless, Ltd.

Day	GCT Beginning	GCT End	Receiving Station	Location of Transmitters
September 13	1320	1405	Brentwood, England	Austria, Brazil, Bulgaria, Canary Islands, Chile, Colombia, India, Madagascar, Palestine, Spain, Thailand, Uruguay, Venezuela
13	1320	1405	Somerton, England	Argentina, Australia, Barbados, Canada, Egypt
13	1833	1845	Somerton, England	Argentina, Barbados, Canada, New York
21	1108	1330	Brentwood, England	Austria, Belgian Congo, Brazil, Bulgaria, Canary Islands, Chile, Colombia, Greece, India, Iran, Kenya, Madagascar, Palestine, Portugal, Southern Rhodesia, Spain, Switzerland, Syria, Turkey, Uruguay, U.S.S.R., Venezuela, Yugoslavia, Zanzibar
21	1108	1330	Somerton, England	Argentina, Australia, Barbados, Canada, Ceylon, China, Egypt, Gold Coast, India, Japan, New York, Union of South Africa
October 5	1435	1525	Somerton, England	Canada, Japan, New York

Note - Observers are invited to send to the CRPL information on times of beginning and end of sudden ionosphere disturbances, for publication as above. Address letters to Central Radio Propagation Laboratory, National Bureau of Standards, Washington 25, D.C.

Table 79

Provisional Radio Propagation Quality Figures
September 1946
Compared with CRPL Warnings and CRPL Probable Disturbed Period Forecasts

Day	North Atlantic Quality Figure 01-12 GCT	North Atlantic Quality Figure 13-24 GCT	North Atlantic CRPL* Warning 01-12 GCT	North Atlantic CRPL* Warning 13-24 GCT	North Atlantic CRPL Probable Disturbed Period Forecast	North Atlantic Geomagnetic K_A 01-12 GCT	North Atlantic Geomagnetic K_A 13-24 GCT	North Pacific Quality Figure 01-12 GCT	North Pacific Quality Figure 13-24 GCT	North Pacific CRPL* Warning 01-12 GCT	North Pacific CRPL* Warning 13-24 GCT	North Pacific CRPL Probable Disturbed Period Forecast	North Pacific Geomagnetic K_A 01-12 GCT	North Pacific Geomagnetic K_A 13-24 GCT
1	6	6	X			1	1	7	7	X			1	1
2	6	6				2	1	6	5				2	1
3	6	6				1	2	6	6				1	2
4	5	6				3	2	5	8				3	2
5	5	5				2	2	6	7				2	2
6	6	6				2	0	6	8				2	0
7	6	5				2	3	7	6				2	3
8	6	6				2	2	5	7				2	2
9	6	6				2	3	5	8				2	3
10	5	6	X		X	3	2	5	(2)	X		X	3	2
11	5	6			X	2	2	(4)	5			X	2	2
12	6	6			X	2	2	6	6			X	2	2
13	6	5			X	2	2	6	7			X	2	2
14	6	6				2	2	5	7				2	2
15	6	7	X			1	2	6	6	X			1	2
16	6	6				1	4	(3)	-				1	4
17	(4)	(4)	X	X	X	3	3	5	(4)	X	X	X	3	3
18	(2)	(3)	X	X	X	6	6	(2)	(4)	X	X	X	6	6
19	(2)	(3)	X	X	X	4	4	(3)	(2)	X	X	X	4	4
20	(4)	5	X	X	X	2	1	(4)	7	X	X	X	2	1
21	(4)	(4)	X	X	X	1	4	(4)	(3)	X	X	X	1	4
22	(2)	(2)		X		6	7	(1)	(3)		X		6	7
23	(2)	(2)	X	X		6	6	(2)	(4)	X	X		6	6
24	(3)	(3)	X	X		3	2	(3)	6	X	X		3	2
25	(4)	(4)	X	X		1	1	(4)	7	X	X		1	1
26	5	5				1	2	7	7				1	2
27	5	(4)		X	X	3	4	5	(4)		X	X	3	4
28	(4)	(4)	X	X	X	5	5	(4)	7	X	X	X	5	5
29	(4)	(4)	X	X	X	3	3	6	(4)	X	X	X	3	3
30	(3)	(4)	X	X		4	3	7	7	X	X		4	3

Score:

H	13	8	12	10
M	0	5	3	5
G	14	13	12	13
(S)	1	3	0	0
S	2	1	3	2

*Broadcast on WWV, Washington, D.C. Times of warnings recorded to nearest half-day as broadcast.

Quality Figure Scale:
1 = Useless
2 = Very poor
3 = Poor
4 = Poor to fair
5 = Fair
6 = Fair to good
7 = Good
8 = Very good
9 = Excellent

Symbols
X Warning given or probable disturbed date.

H Quality 4 or worse on day or half-day of warning.

M Quality 4 or worse on day or half day of no warning.

G Quality 5 or better on day of no warning.

(S) Quality 5 on day of warning.

S Quality 6 or better on day of warning.

( ) Quality 4 or worse, (disturbed).

Geomagnetic K_A on the standard scale of 0 to 9, 9 representing the greatest disturbance.

Table 80

Daily Median Values of American Relative Sunspot Numbers*

October 1946

Date	No.	Date	No.
1	89	16	128
2	99	17	151
3	64	18	122
4	70	19	128
5	64	20	144
6	66	21	150
7	63	22	152
8	56	23	158
9	66	24	156
10	45	25	141
11	37	26	126
12	82	27	122
13	106	28	102
14	106	29	106
15	99	30	112
		31	104
No. Days	31	Mean	103.7

* Median of data from 12 observers.

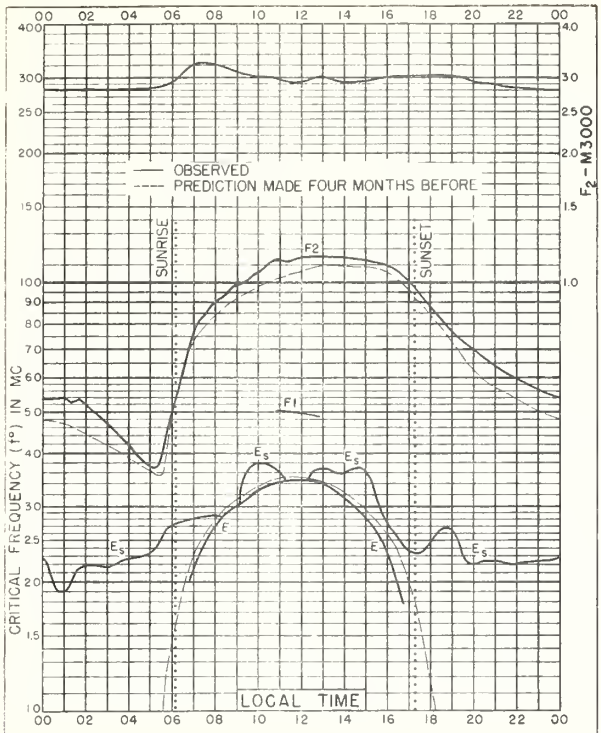

Fig 1 WASHINGTON, D.C
39.0°N, 77.5°W OCTOBER 1946

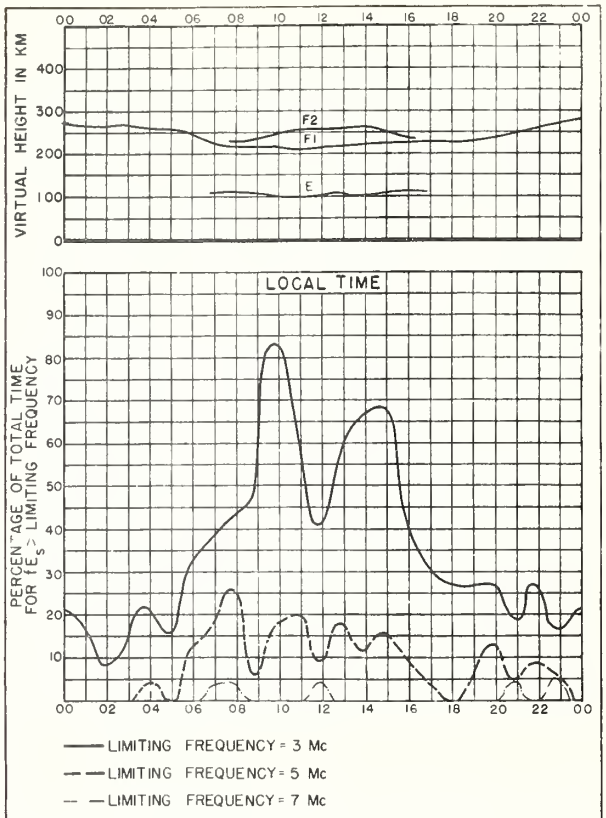

Fig. 2. WASHINGTON, D.C OCTOBER 1946

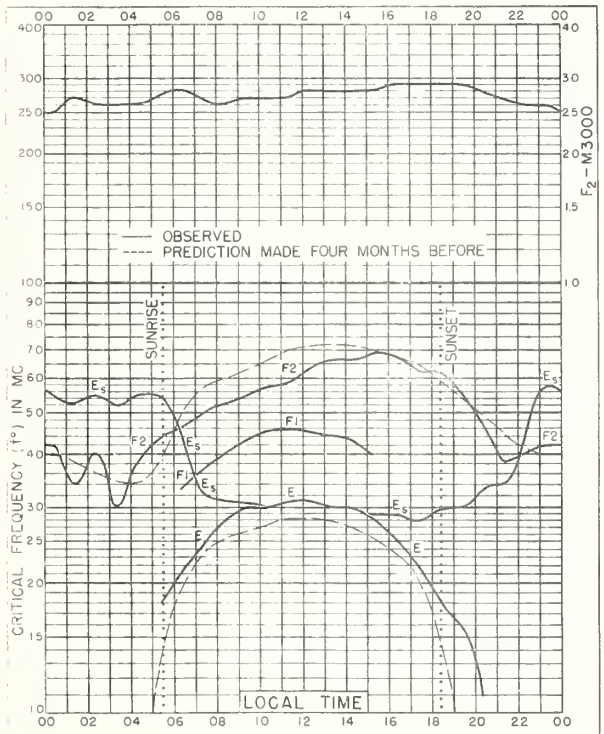

Fig 3. FAIRBANKS, ALASKA
64.9°N, 147.8°W SEPTEMBER 1946

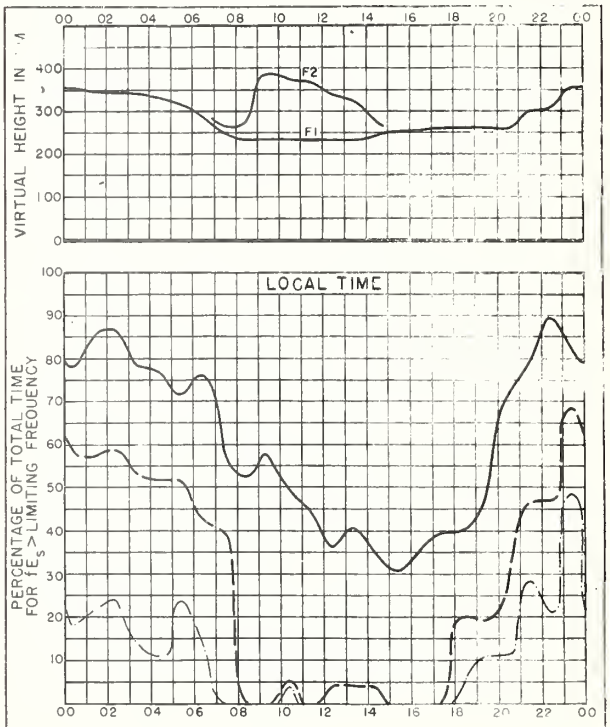

Fig. 4. FAIRBANKS, ALASKA SEPTEMBER 1946

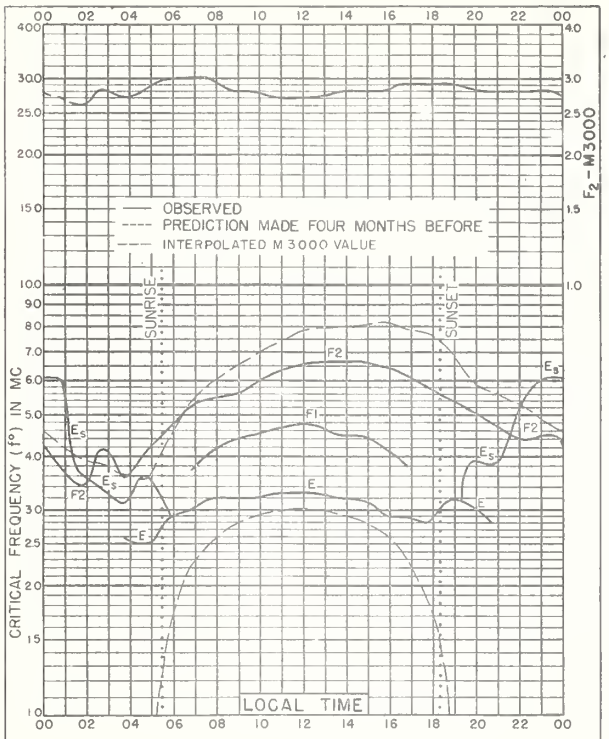

Fig. 5. CHURCHILL, CANADA
58.8°N, 94.2°W SEPTEMBER 1946

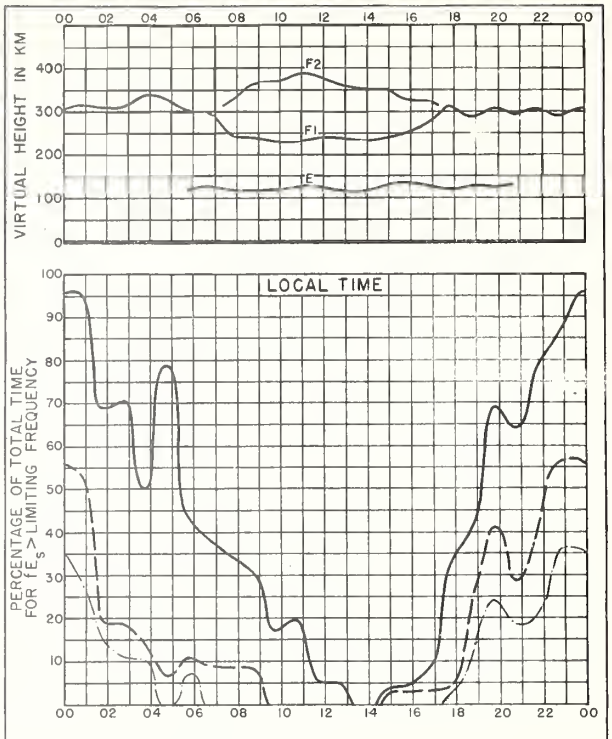

Fig. 6. CHURCHILL, CANADA SEPTEMBER 1946

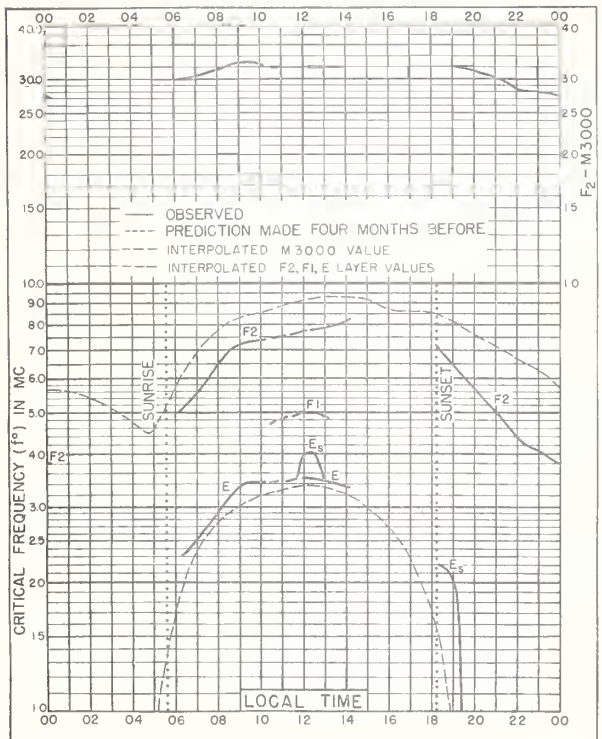

Fig. 7. ADAK, ALASKA
51.9°N, 176.6°W SEPTEMBER 1946

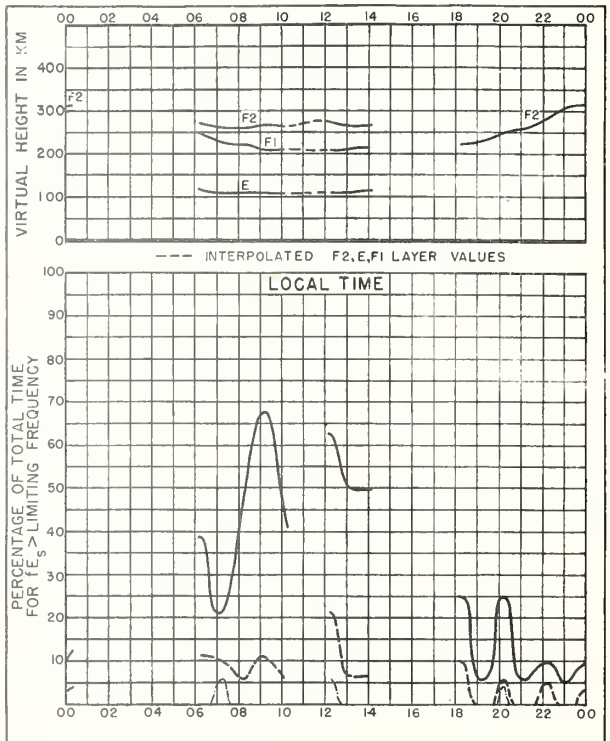

Fig. 8. ADAK, ALASKA SEPTEMBER 1946

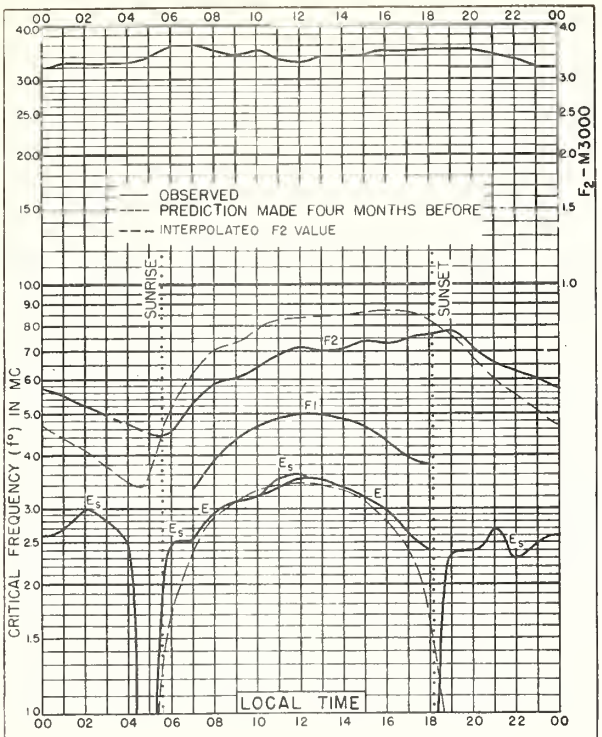

Fig. 9. ST. JOHN'S, NEWFOUNDLAND
47.6°N, 52.7°W SEPTEMBER 1946

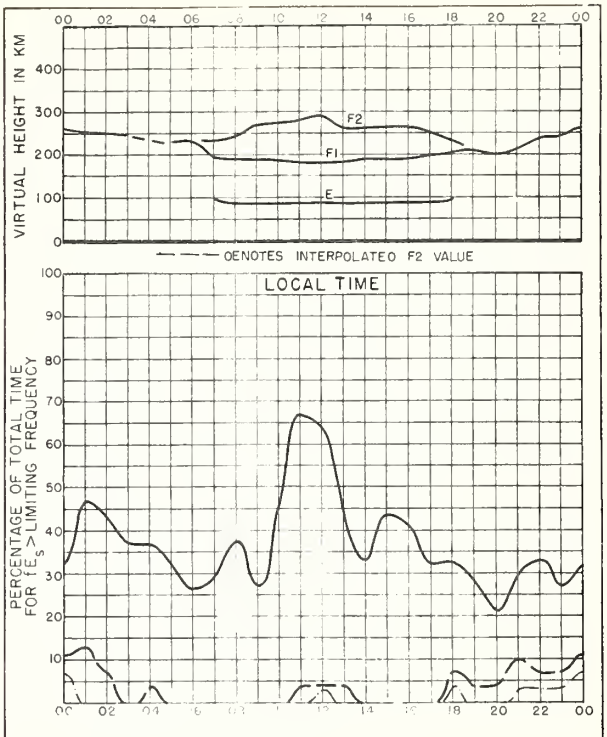

Fig. 10. ST. JOHN'S, NEWFOUNDLAND SEPTEMBER 1946

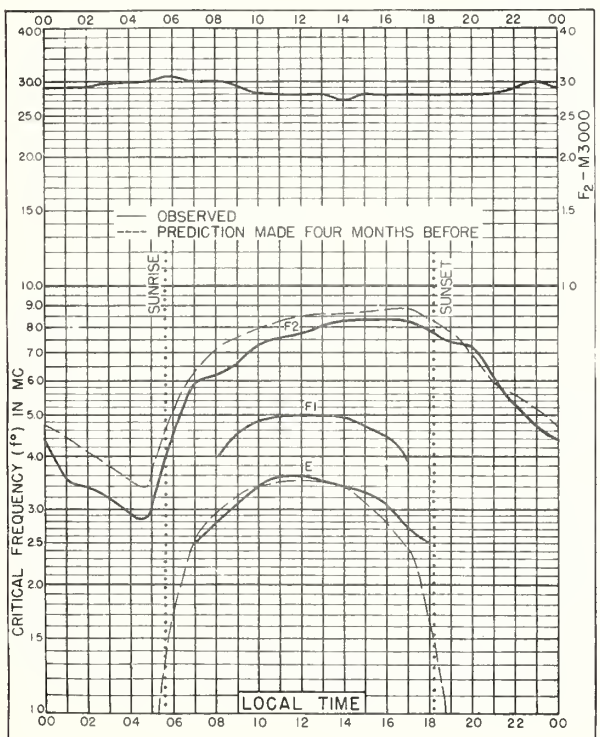

Fig. 11. OTTAWA, CANADA
45.5°N, 75.8°W SEPTEMBER 1946

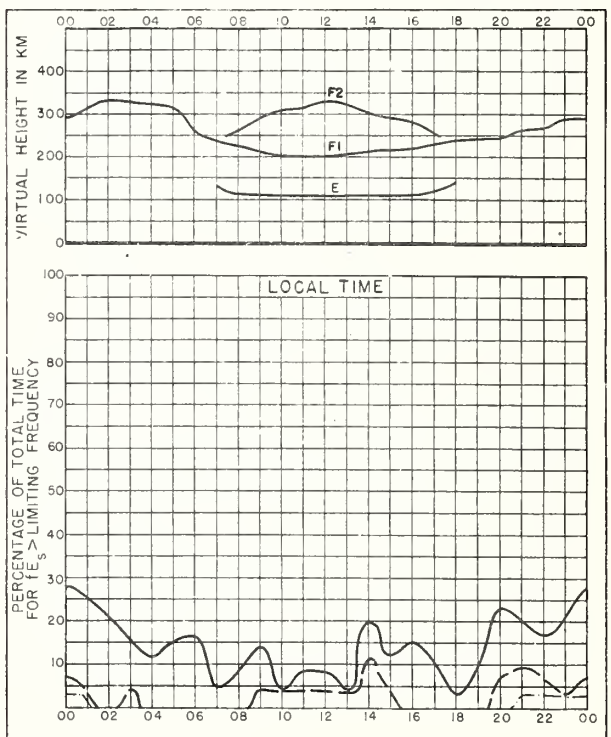

Fig. 12. OTTAWA, CANADA SEPTEMBER 1946

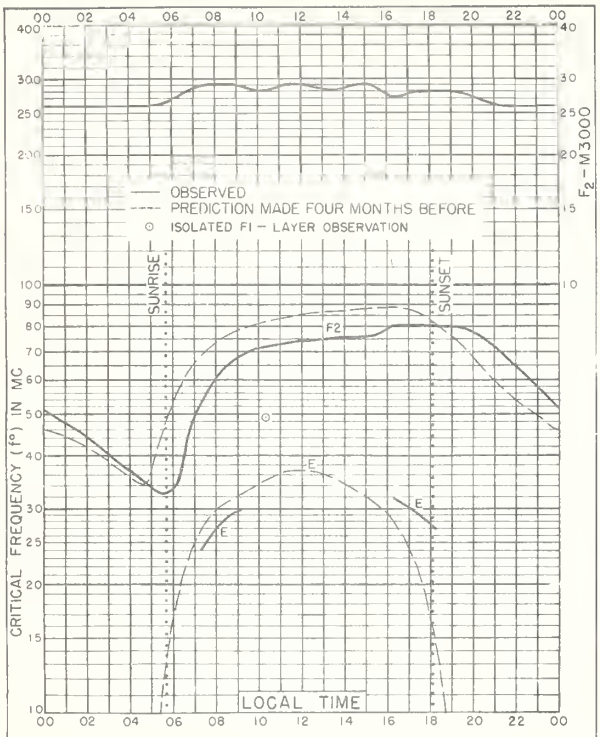

Fig. 13. BOSTON, MASSACHUSETTS
42. 4°N, 71 2°W SEPTEMBER 1946

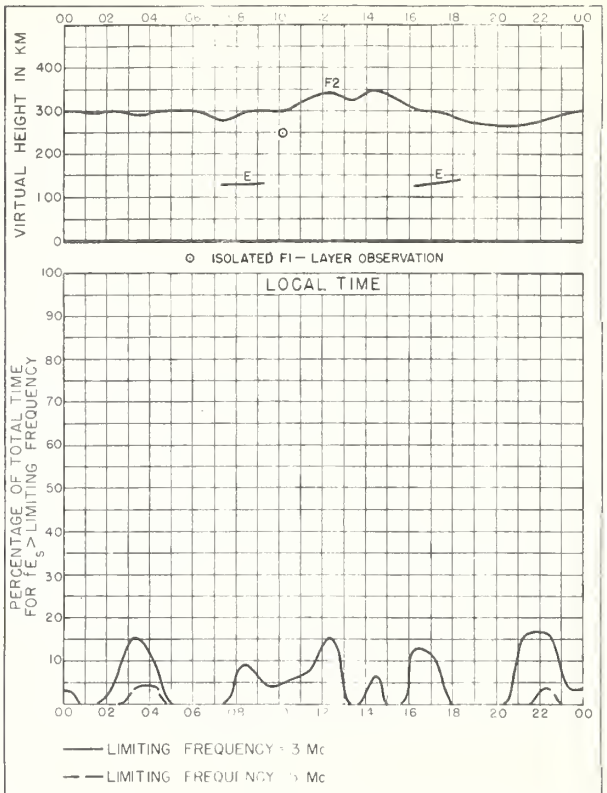

Fig. 14 BOSTON, MASSACHUSETTS SEPTEMBER 1946

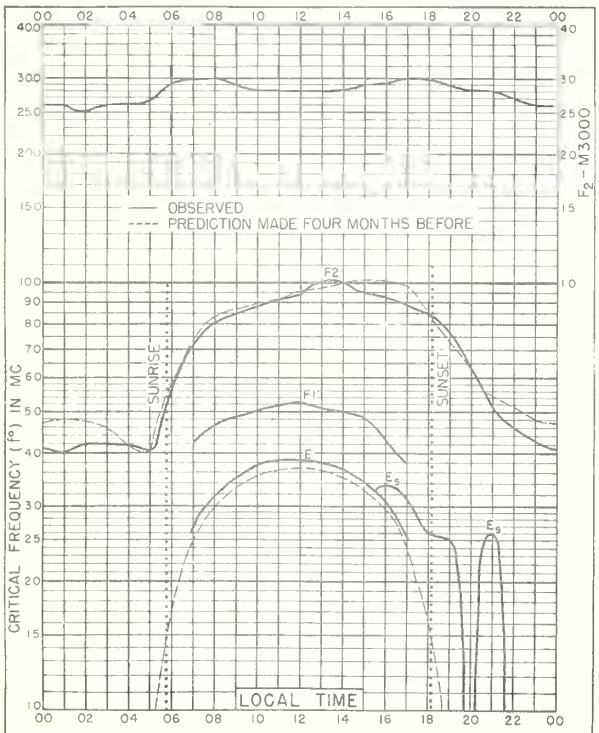

Fig 15. SAN FRANCISCO, CALIFORNIA
37 4°N, 122 2°W SEPTEMBER 1946

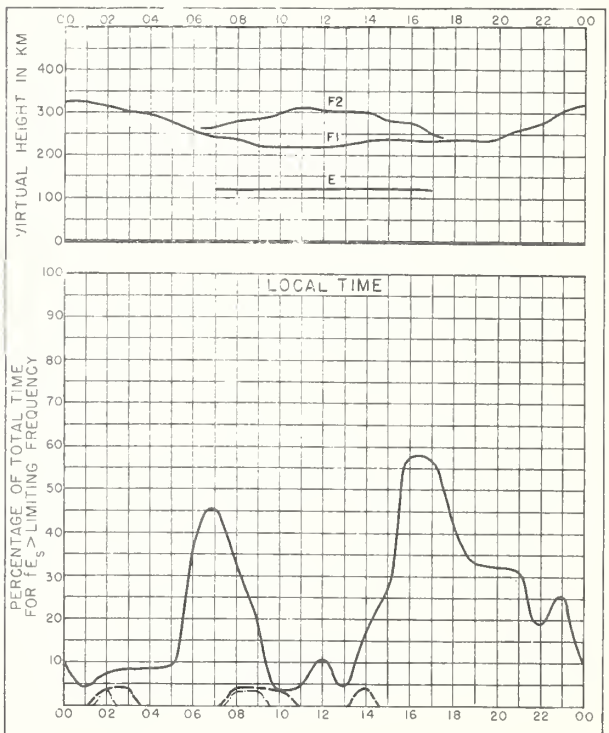

Fig 16. SAN FRANCISCO, CALIFORNIA SEPTEMBER 1946

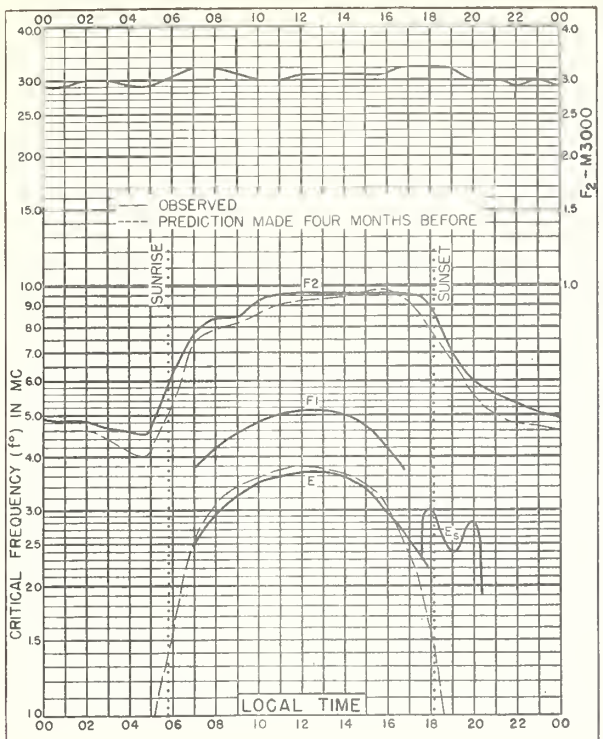

Fig. 17 BATON ROUGE, LOUISIANA
30.5°N, 91.2°W SEPTEMBER 1946

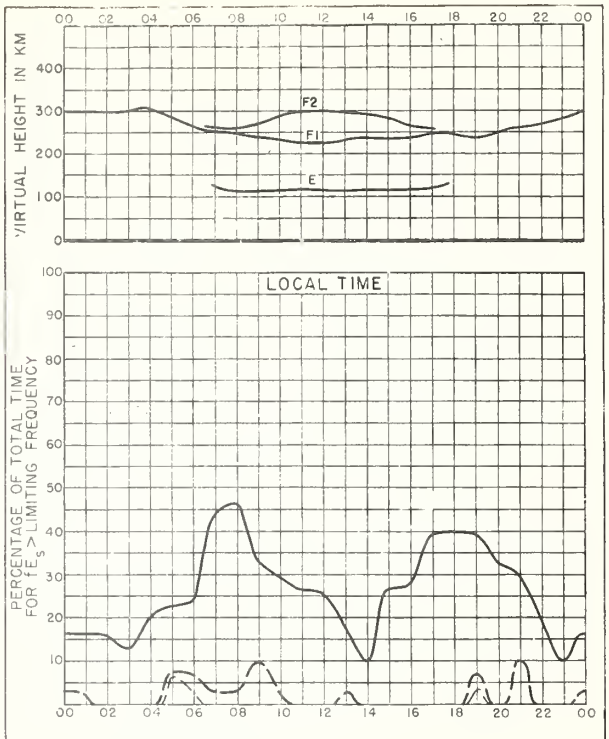

Fig. 18 BATON ROUGE, LOUISIANA SEPTEMBER 1946

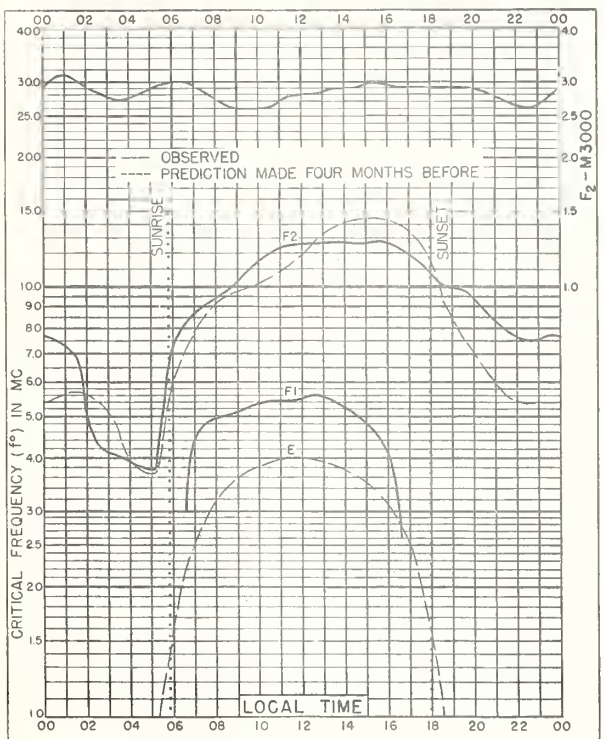

Fig. 19. MAUI, HAWAII
20.8°N, 156.5°W SEPTEMBER 1946

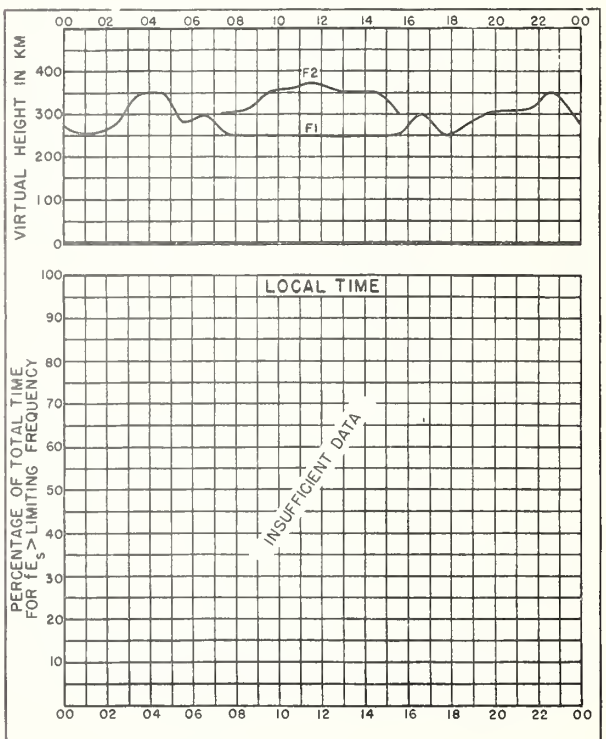

Fig. 20. MAUI, HAWAII SEPTEMBER 1946

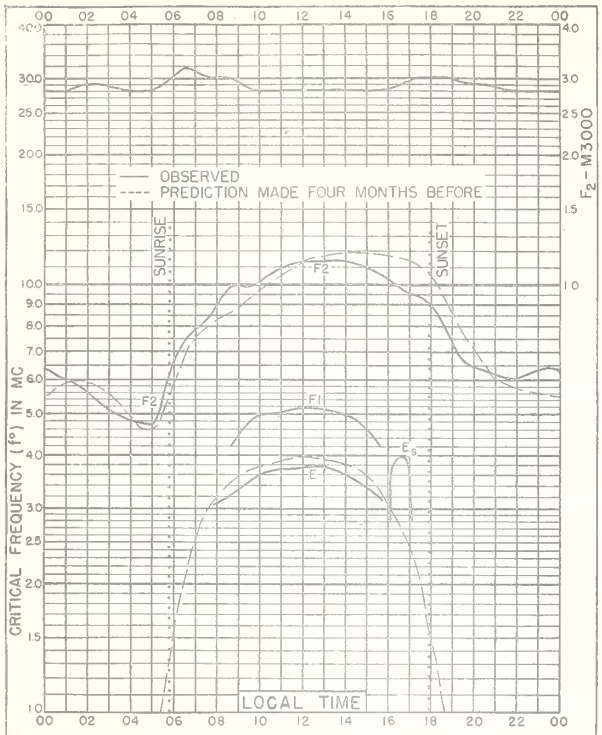

Fig. 21 SAN JUAN, PUERTO RICO
18.4°N, 66.1°W SEPTEMBER 1946

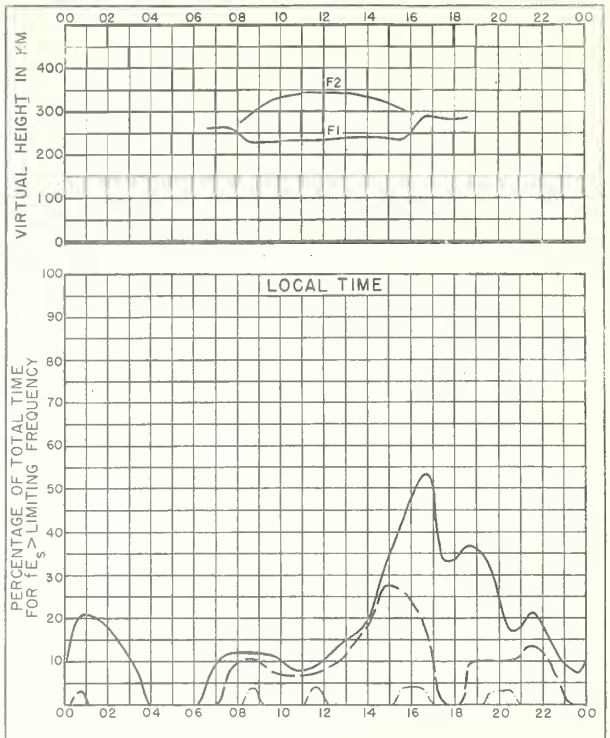

Fig. 22. SAN JUAN, PUERTO RICO SEPTEMBER 1946

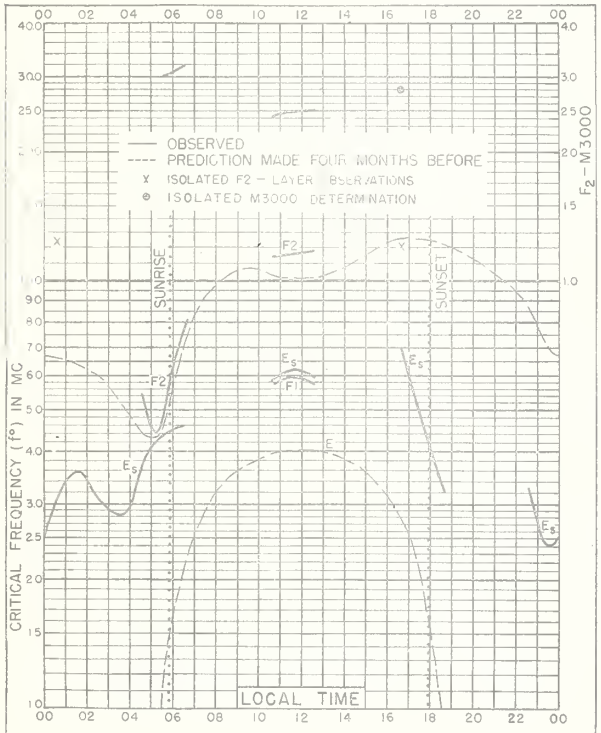

Fig. 23. GUAM I
13.5°N, 144.8°E SEPTEMBER 1946

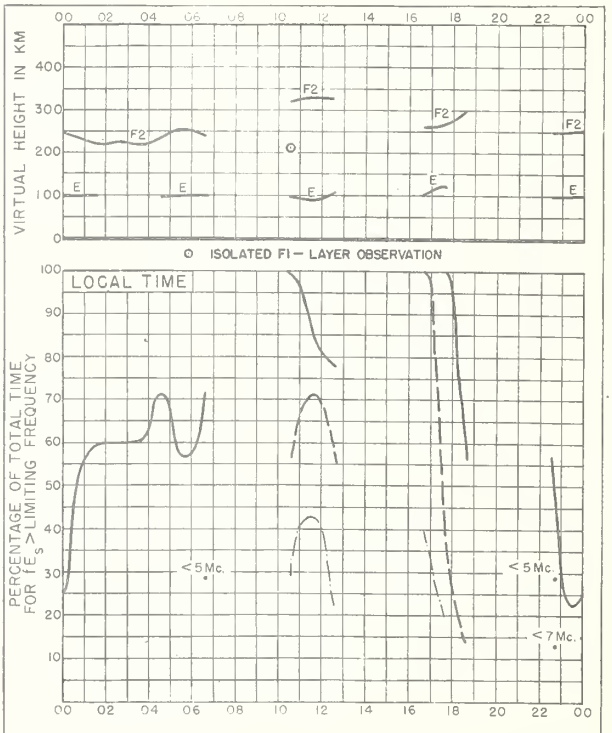

Fig. 24. GUAM I SEPTEMBER 1946

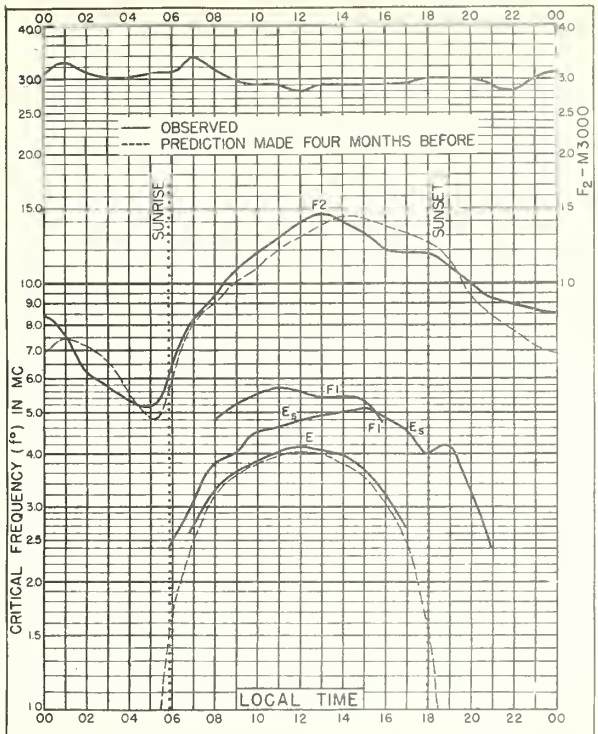

Fig. 25. TRINIDAD, BRIT. WEST INDIES
10.6°N, 61.2°W SEPTEMBER 1946

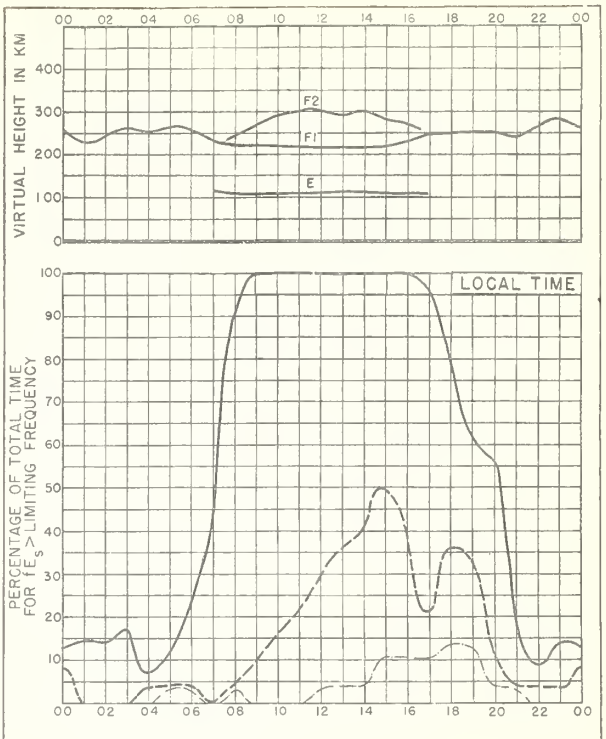

Fig. 26. TRINIDAD, BRIT. WEST INDIES SEPTEMBER 1946

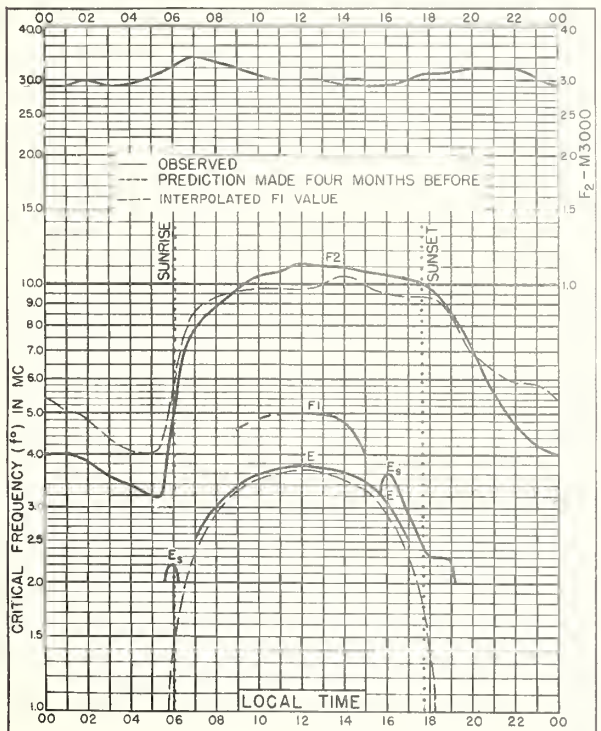

Fig. 27. JOHANNESBURG, U. OF S. AFRICA
26.2°S, 28.0°E SEPTEMBER 1946

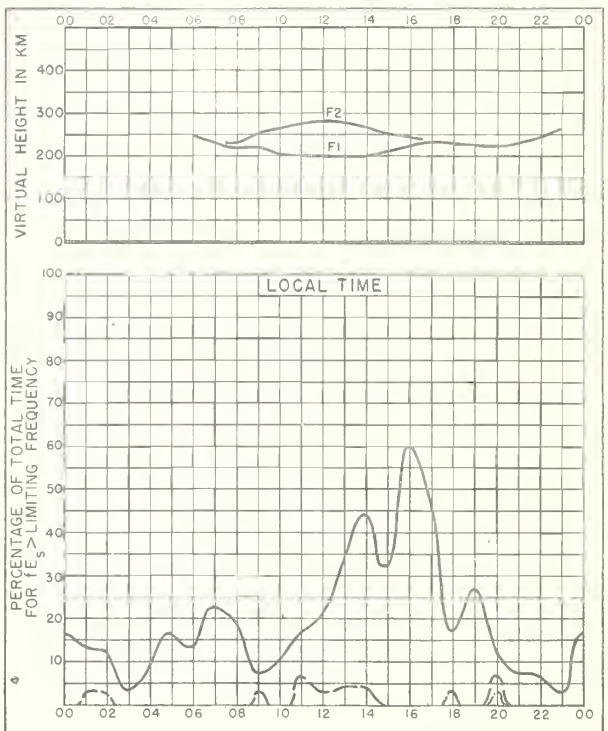

Fig. 28. JOHANNESBURG, U. OF S. AFRICA SEPTEMBER 1946

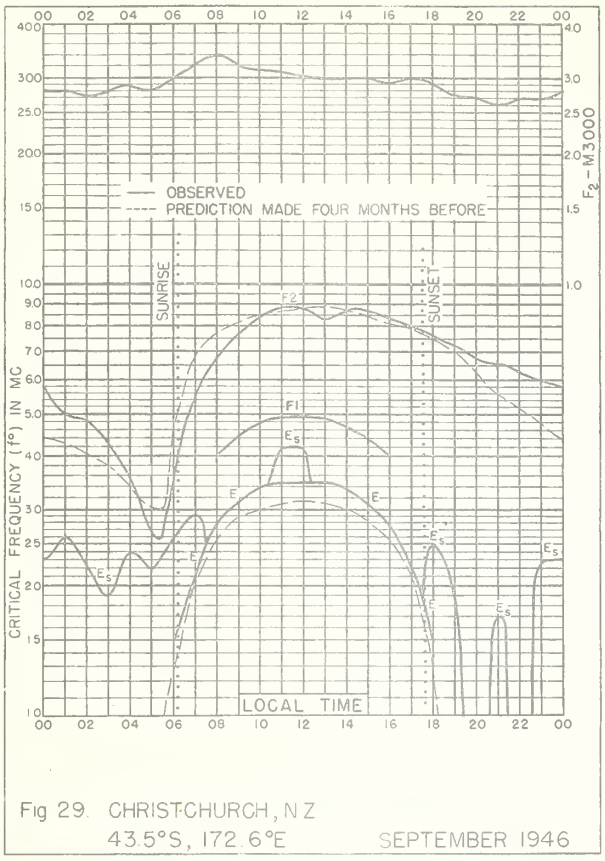

Fig 29. CHRISTCHURCH, N Z
43.5°S, 172.6°E SEPTEMBER 1946

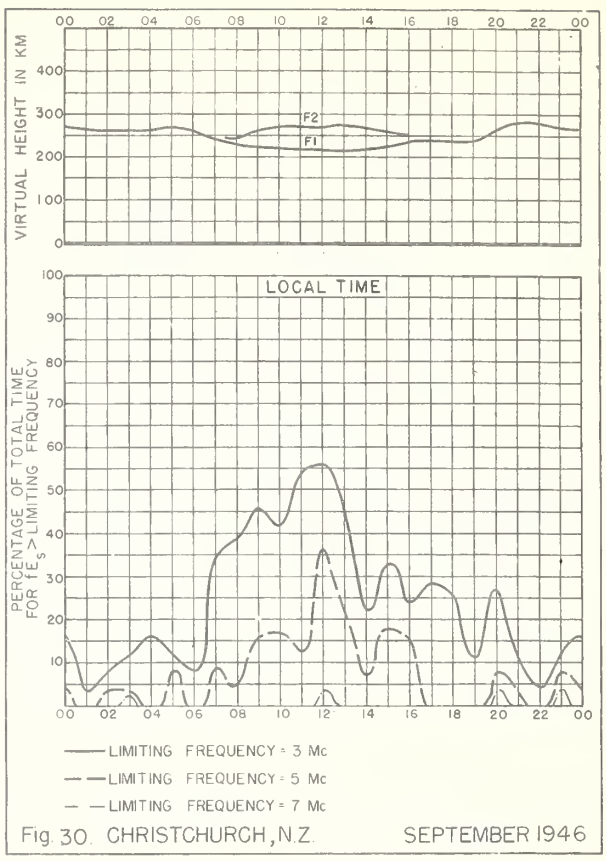

Fig. 30. CHRISTCHURCH, N.Z. SEPTEMBER 1946

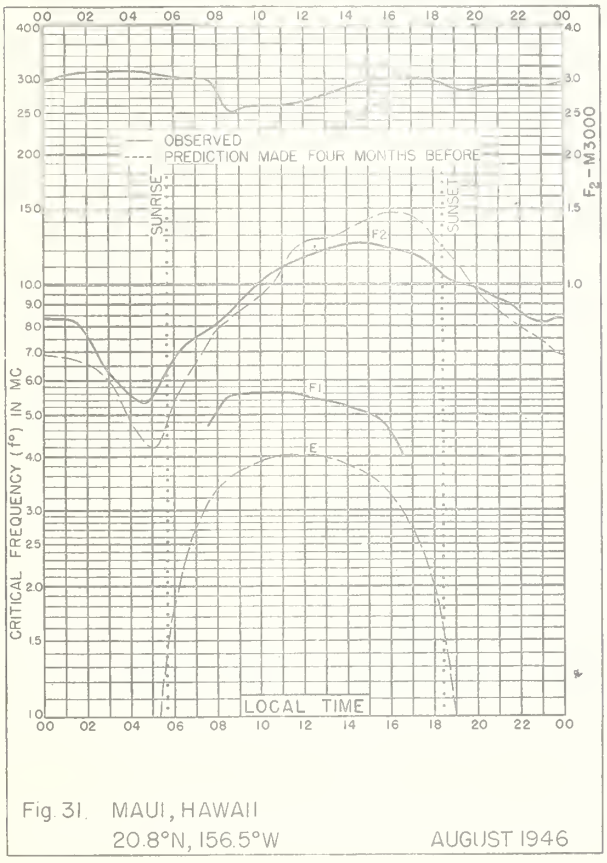

Fig. 31. MAUI, HAWAII
20.8°N, 156.5°W AUGUST 1946

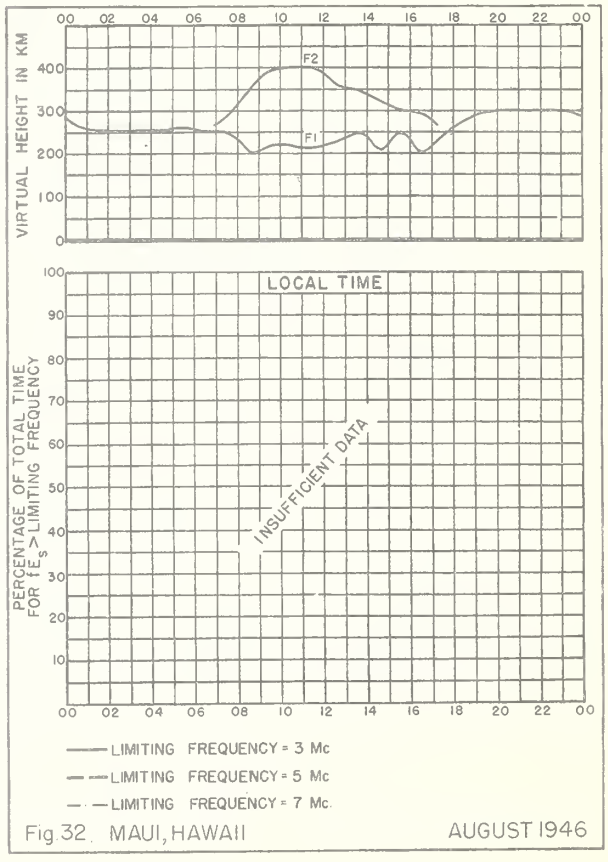

Fig.32. MAUI, HAWAII AUGUST 1946

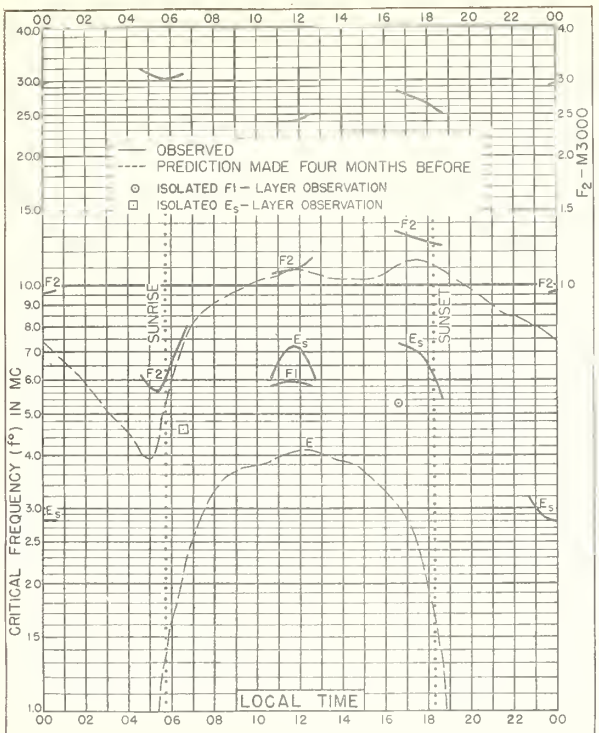

Fig. 33. GUAM I
13.5°N, 144.8°E AUGUST 1946

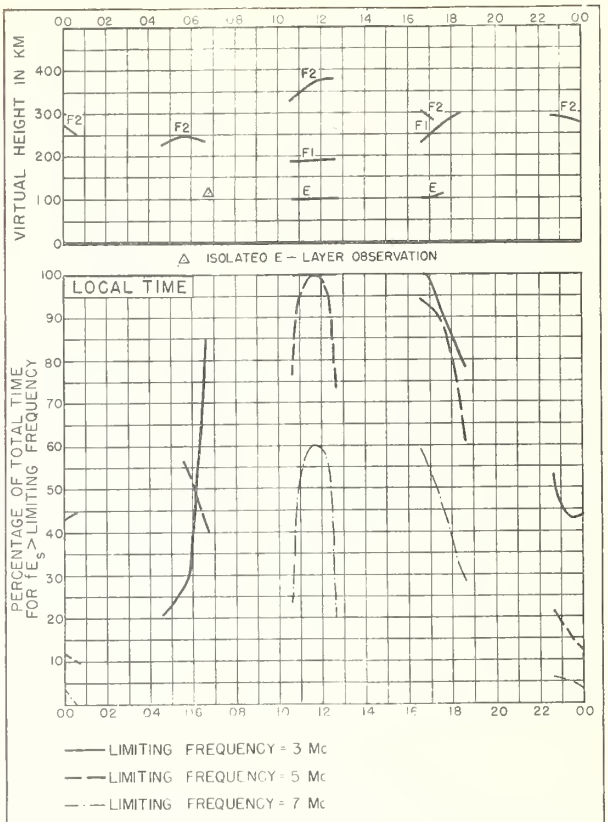

Fig. 34. GUAM I AUGUST 1946

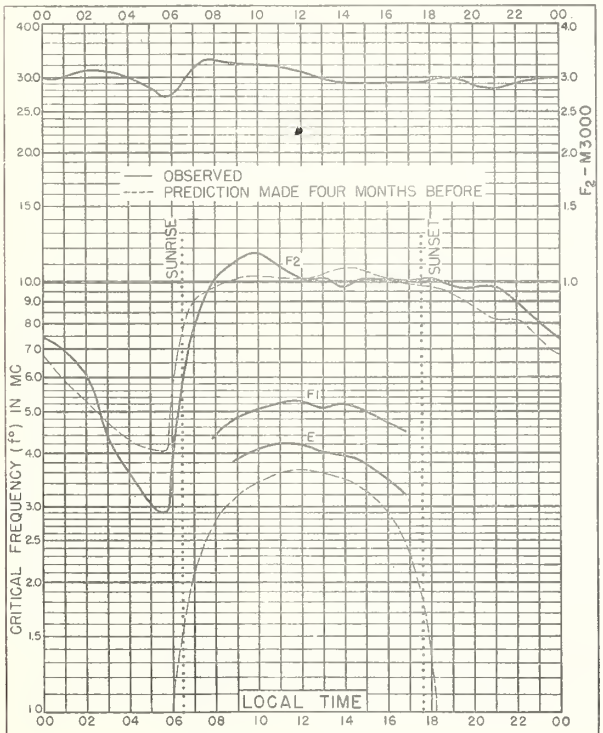

Fig. 35. RAROTONGA I.
21.3°S, 159.8°W AUGUST 1946

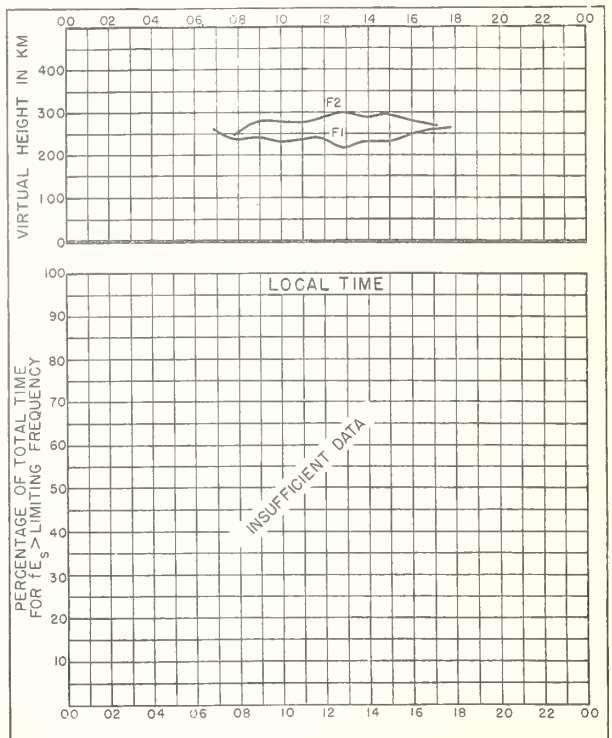

Fig. 36. RAROTONGA I. AUGUST 1946

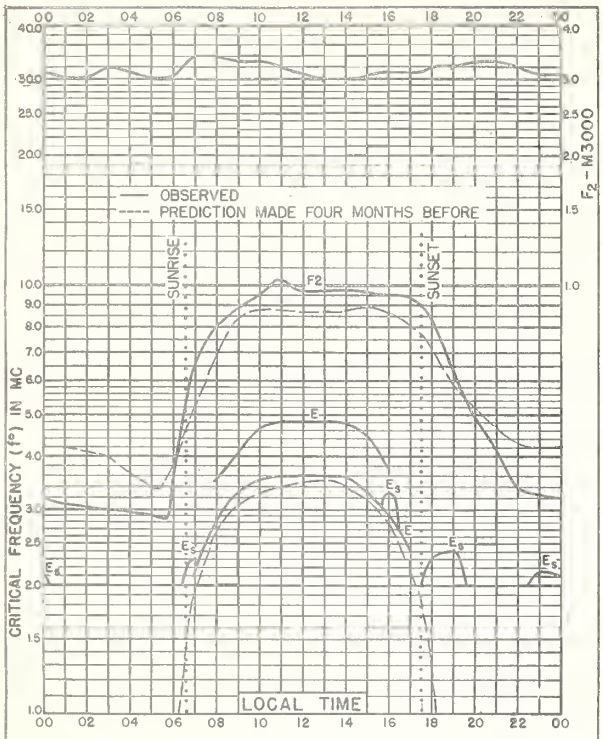

Fig. 37 JOHANNESBURG, U. OF S. AFRICA
26.2°S, 28.0°E AUGUST 1946

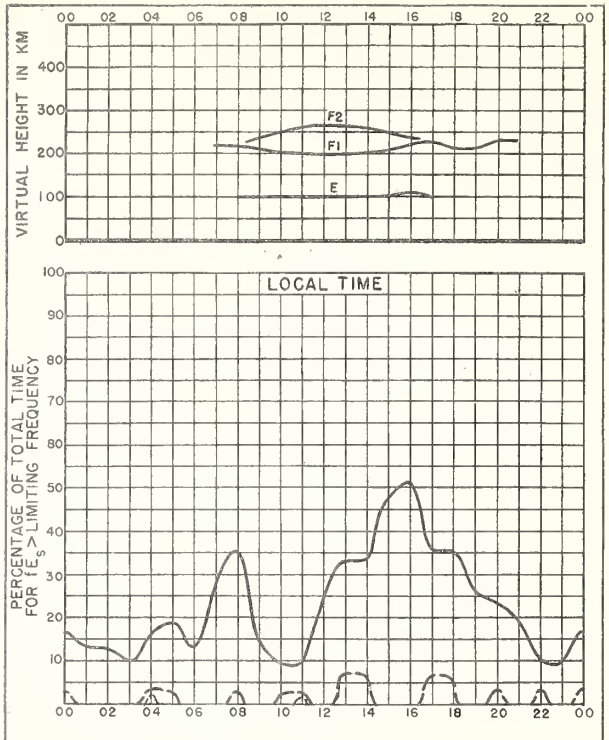

Fig. 38 JOHANNESBURG, U. OF S. AFRICA AUGUST 1946

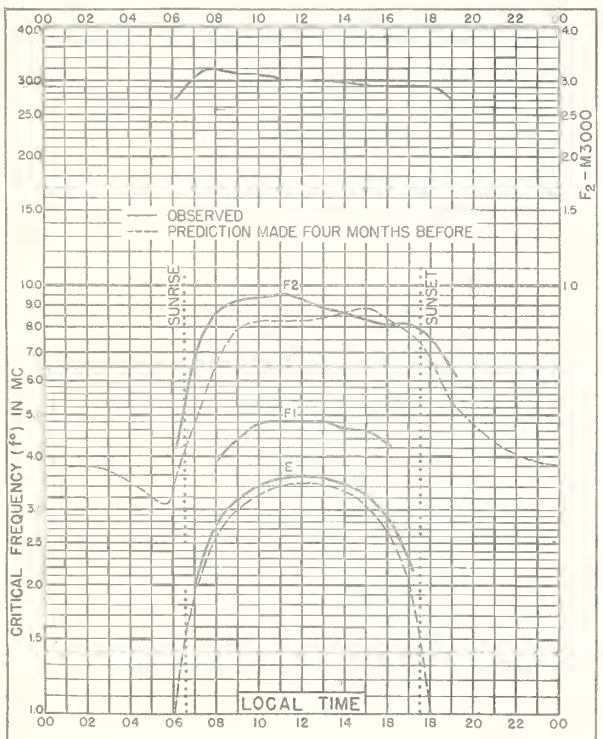

Fig. 39 KERMADEC IS.
29.3°S, 177.9°W AUGUST 1946

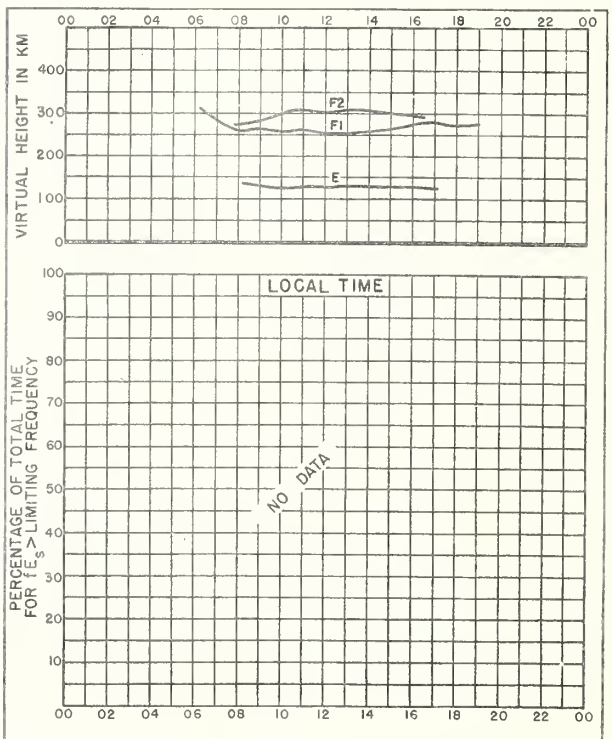

Fig. 40. KERMADEC IS. AUGUST 1946

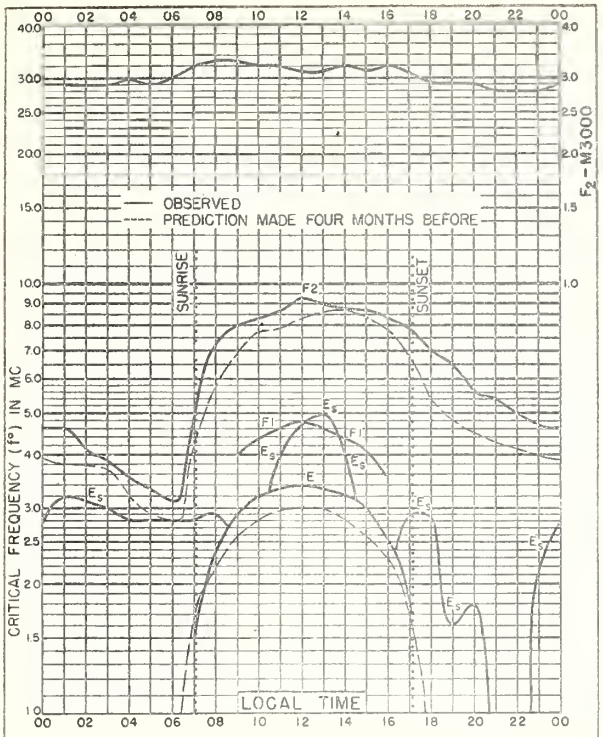

Fig. 41. CHRISTCHURCH, N.Z.
43.5°S, 172.6°E AUGUST 1946

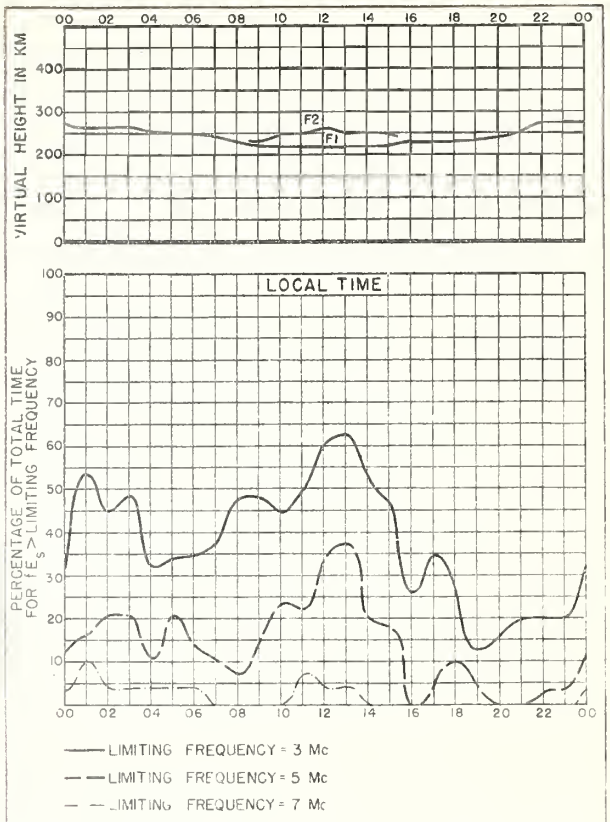

Fig 42. CHRISTCHURCH, N.Z. AUGUST 1946

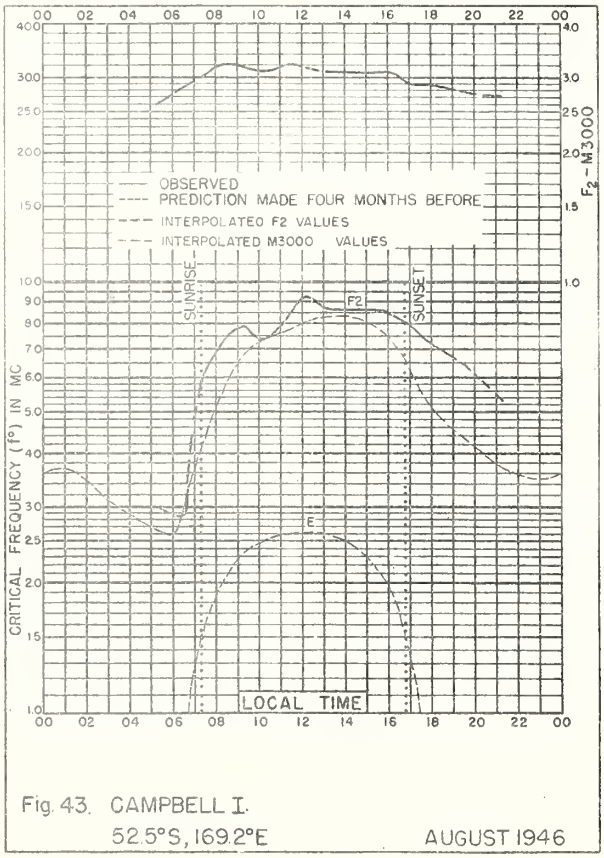

Fig. 43. CAMPBELL I.
52.5°S, 169.2°E AUGUST 1946

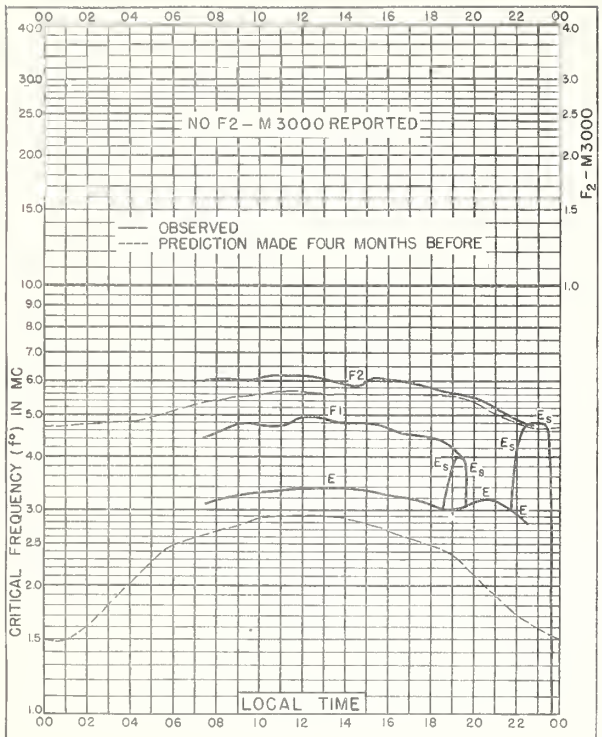

Fig. 44. TROMSO, NORWAY
69.7°N, 18.9°E JULY 1946

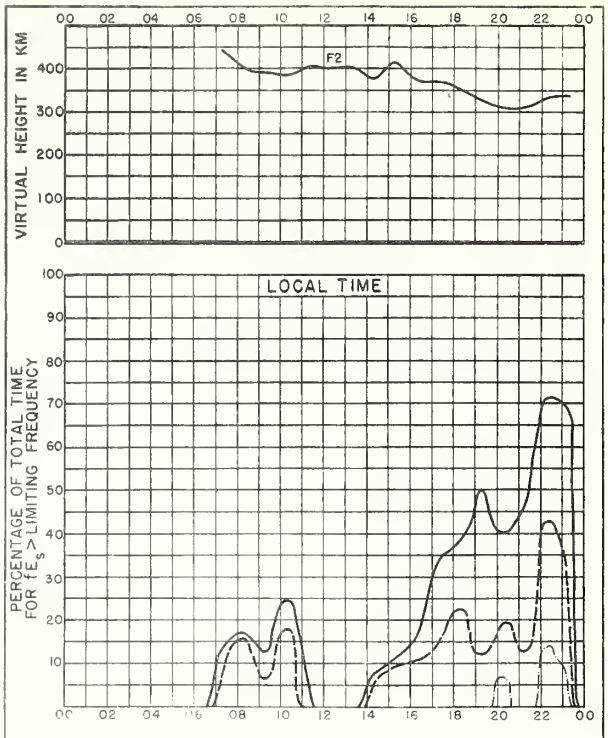

Fig. 45. TROMSO, NORWAY JULY 1946

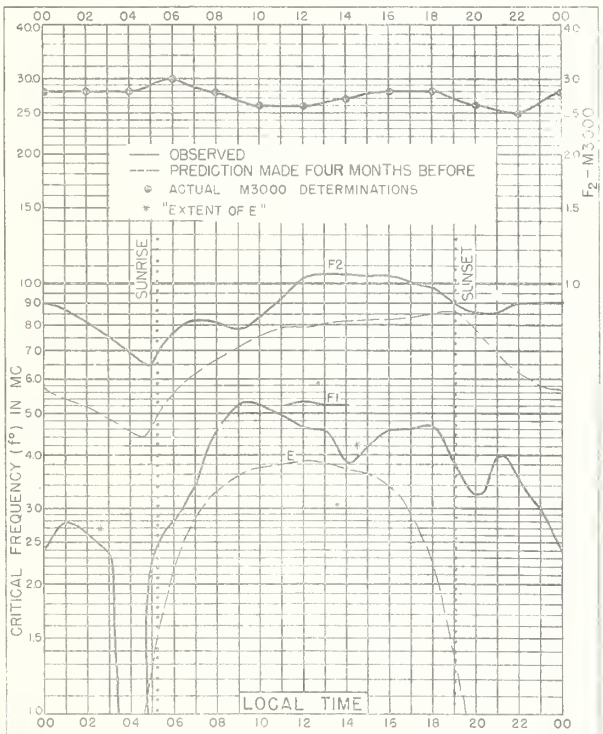

Fig. 46. CAIRO, EGYPT
30.6°N, 31.9°E JULY 1946

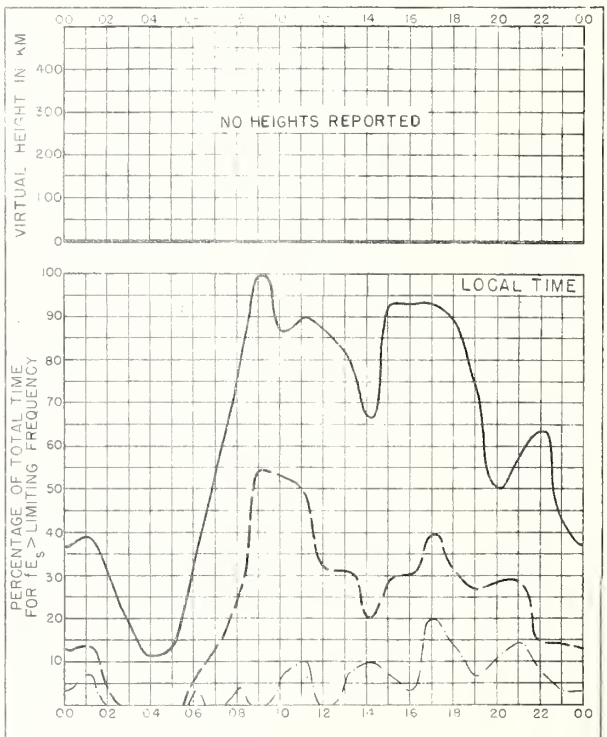

Fig. 47. CAIRO, EGYPT JULY 1946

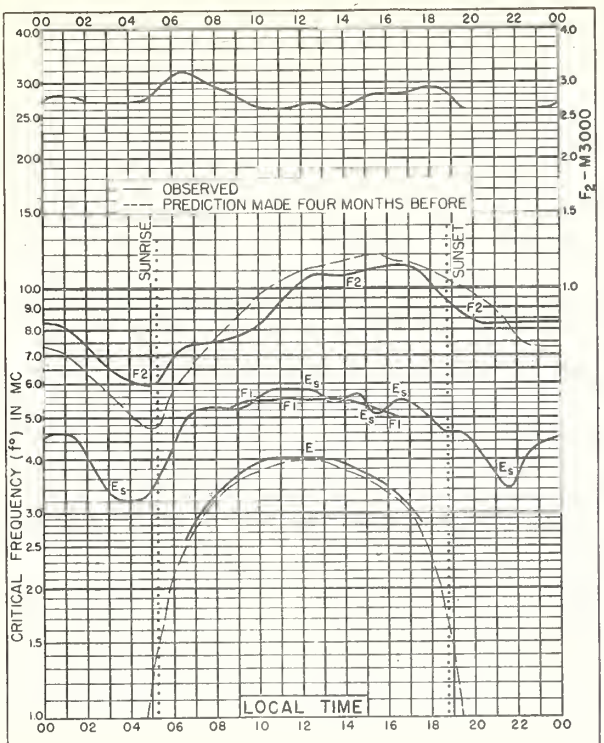

Fig. 48 OKINAWA I.
26.3°N, 127.8°E JULY 1946

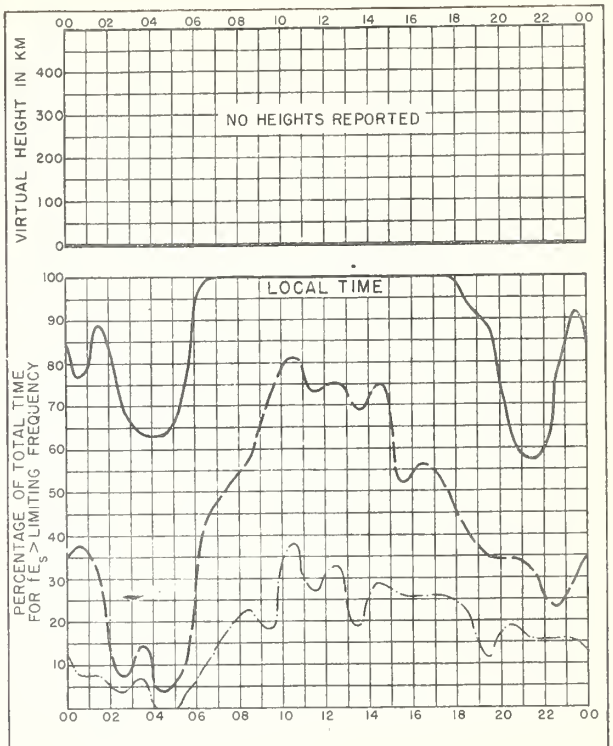

Fig. 49. OKINAWA I. JULY 1946

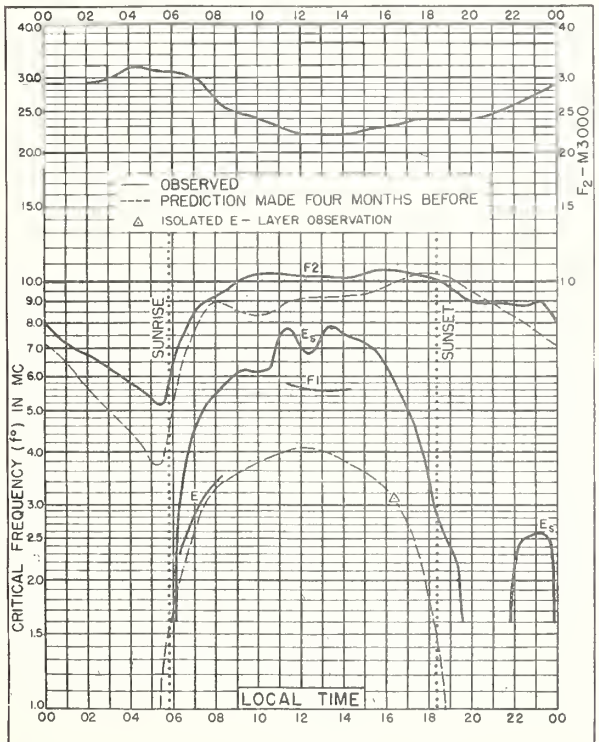

Fig. 50. LEYTE, PHILIPPINE IS.
11.0°N, 125.0°E JULY 1946

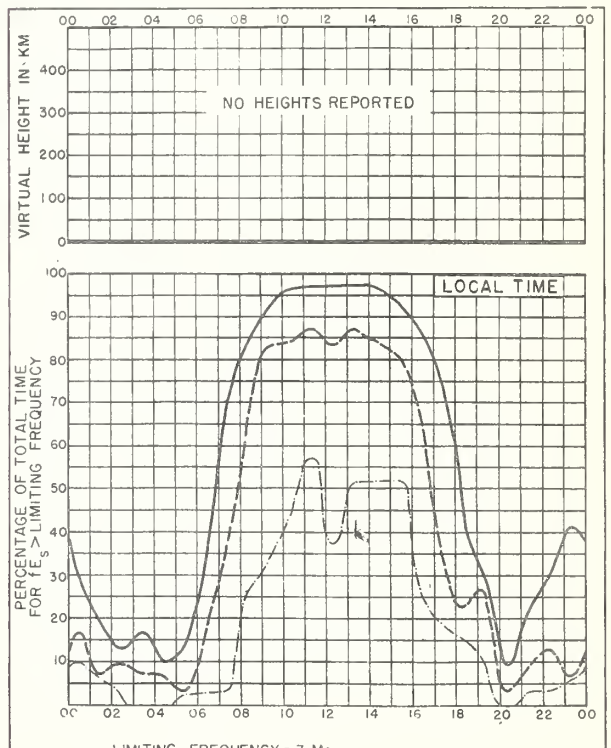

Fig. 51. LEYTE, PHILIPPINE IS. JULY 1946

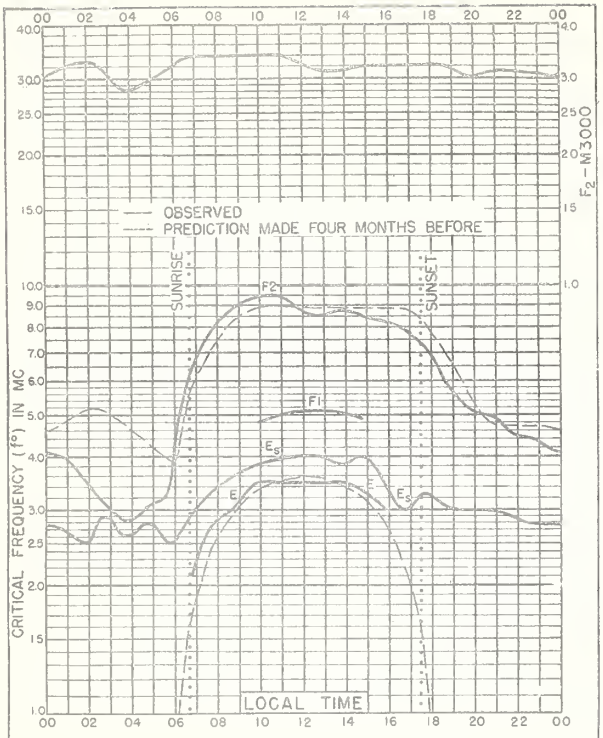

Fig. 52. TOWNSVILLE, AUSTRALIA
19.4°S, 146.5°E JULY 1946

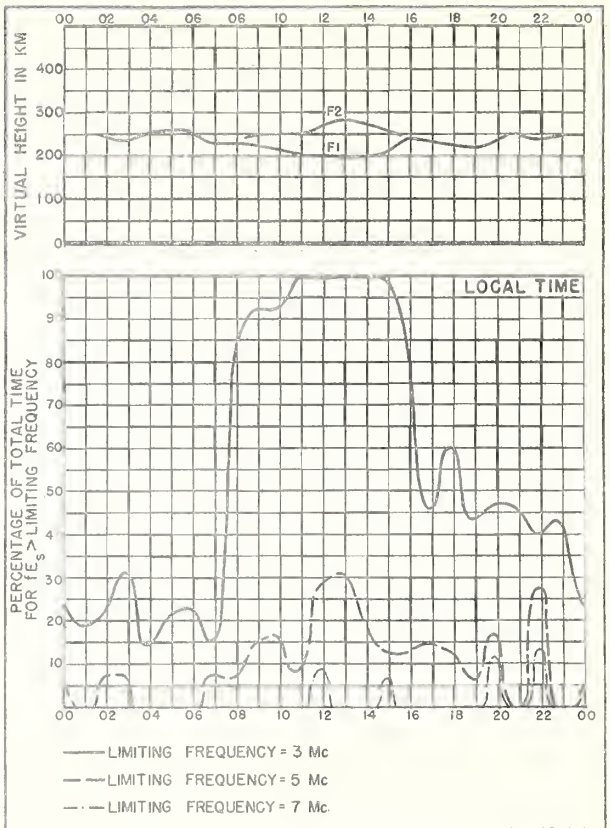

Fig. 53. TOWNSVILLE, AUSTRALIA JULY 1946

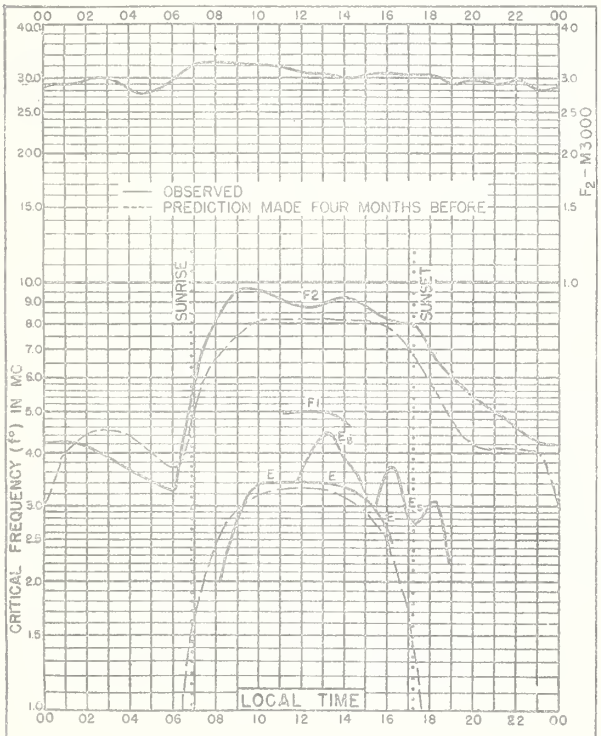

Fig. 54. BRISBANE, AUSTRALIA
27.5°S, 153.0°E JULY 1946

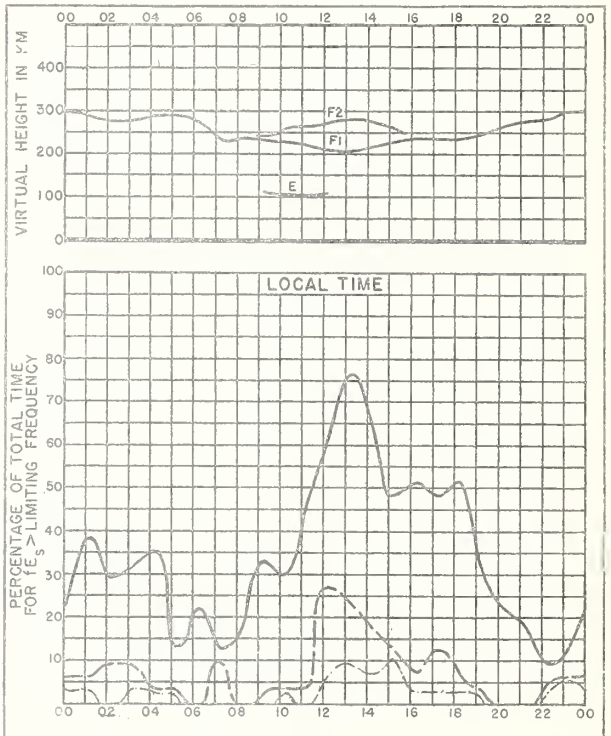

Fig. 55. BRISBANE, AUSTRALIA JULY 1946

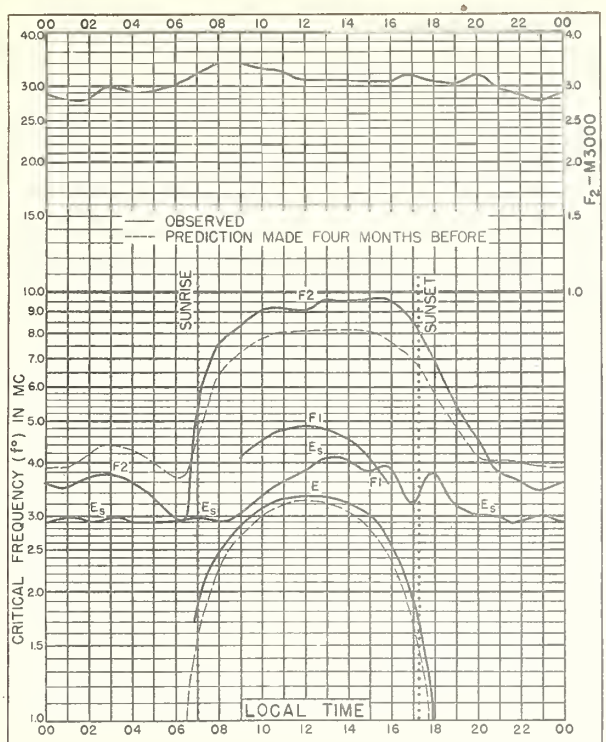

Fig. 56. WATHEROO, W. AUSTRALIA
30.3°S, 115.9°E JULY 1946

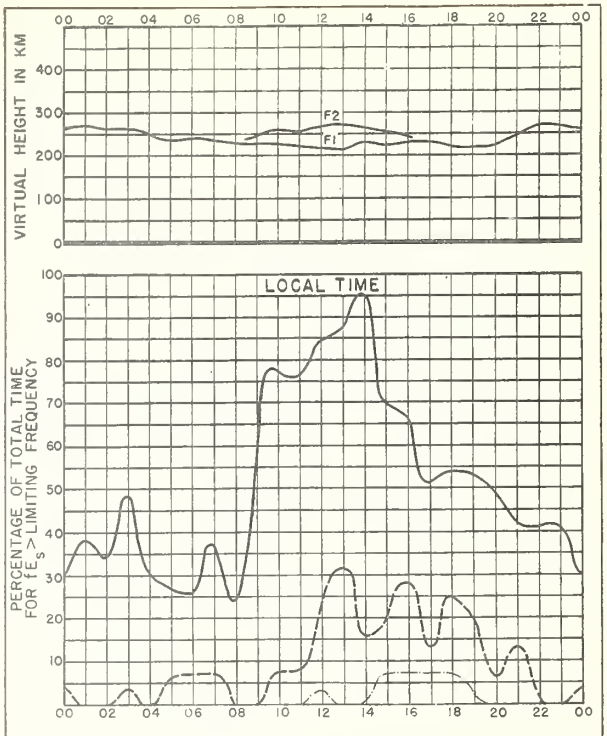

Fig. 57. WATHEROO, W. AUSTRALIA JULY 1946

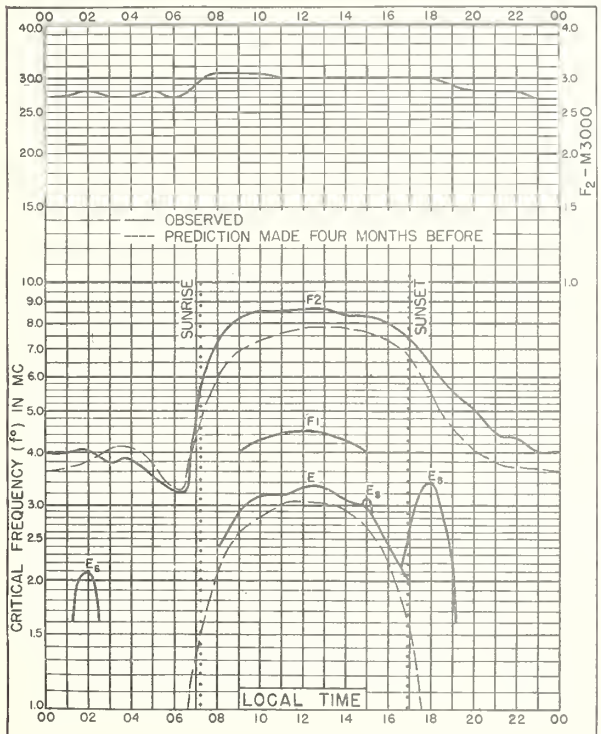

Fig. 58. CANBERRA (MT. STROMLO), AUSTRALIA
35.3°S, 149.0°E JULY 1946

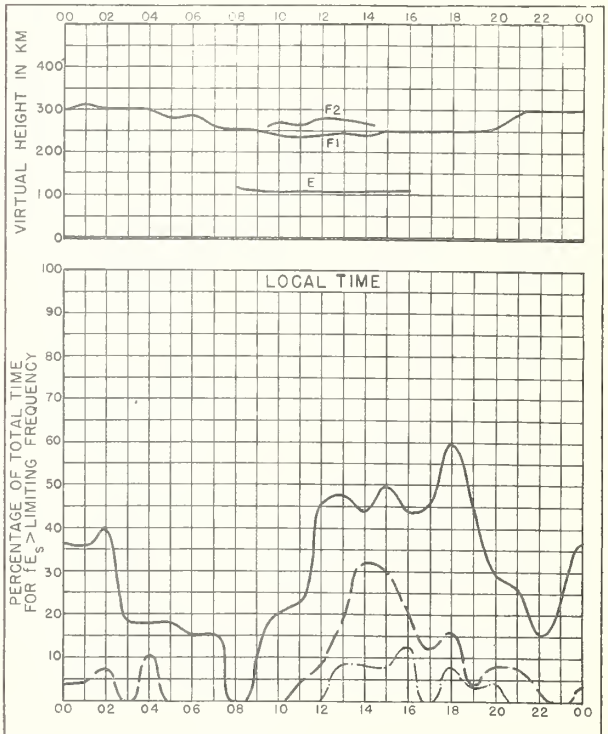

Fig. 59. CANBERRA (MT. STROMLO), AUSTRALIA JULY 1946

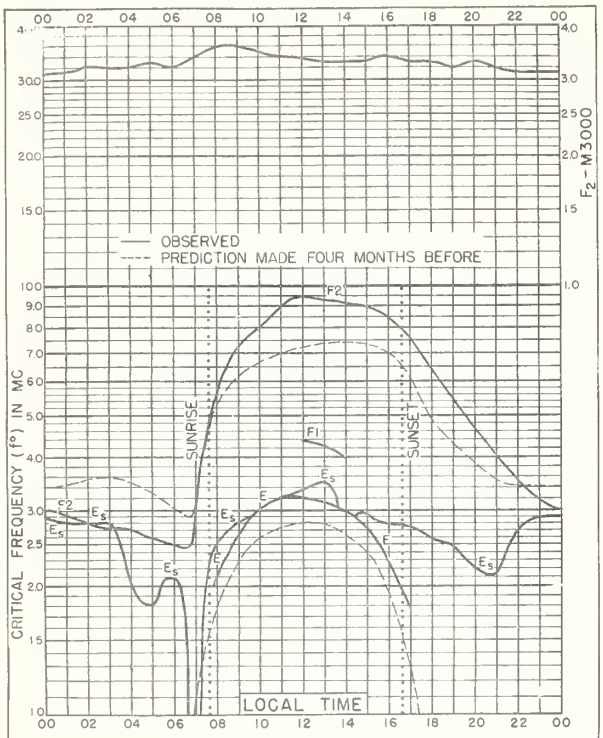

Fig. 60. HOBART, TASMANIA
42.8°S, 147.4°E JULY 1946

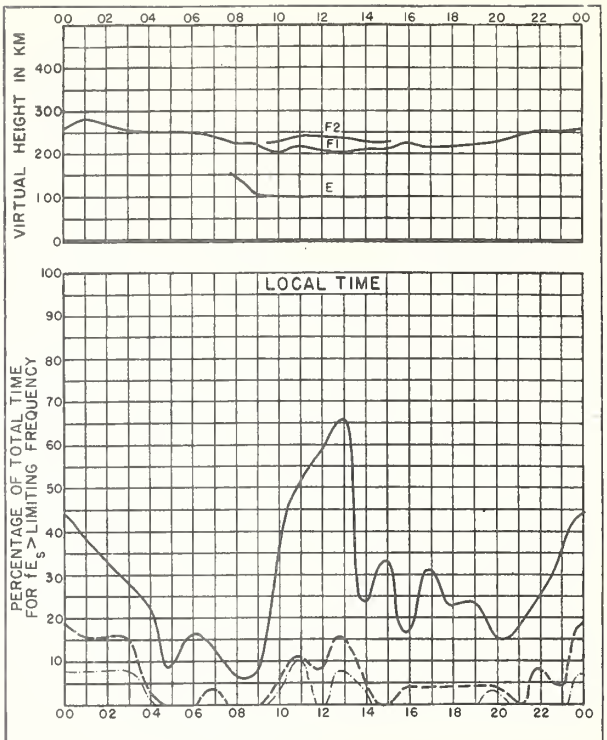

Fig. 61. HOBART, TASMANIA JULY 1946

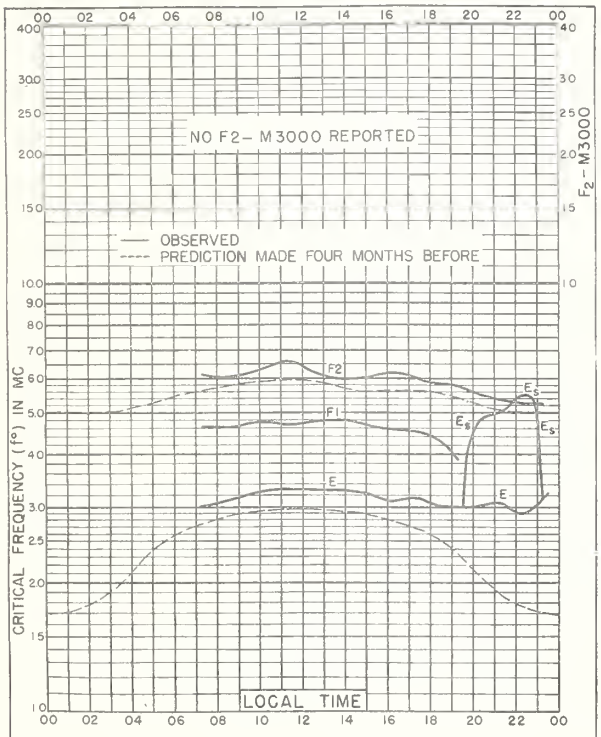

Fig. 62. TROMSO, NORWAY
69.7°N, 18.9°E JUNE 1946

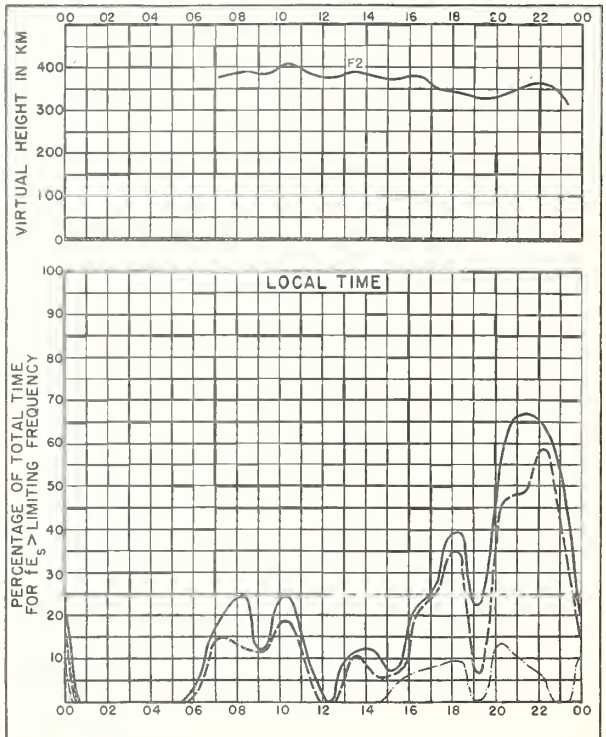

Fig. 63. TROMSO, NORWAY JUNE 1946

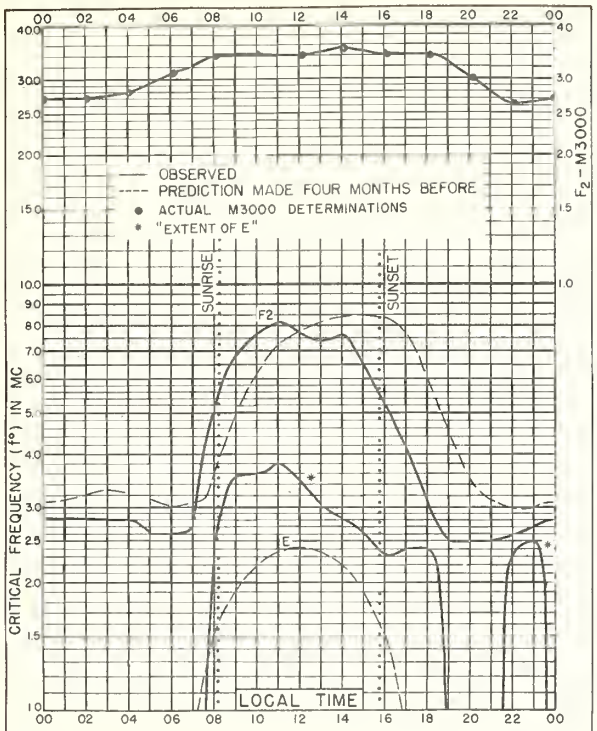

Fig. 64. FALKLAND IS.
51.7°S, 57.7°W
JUNE 1946

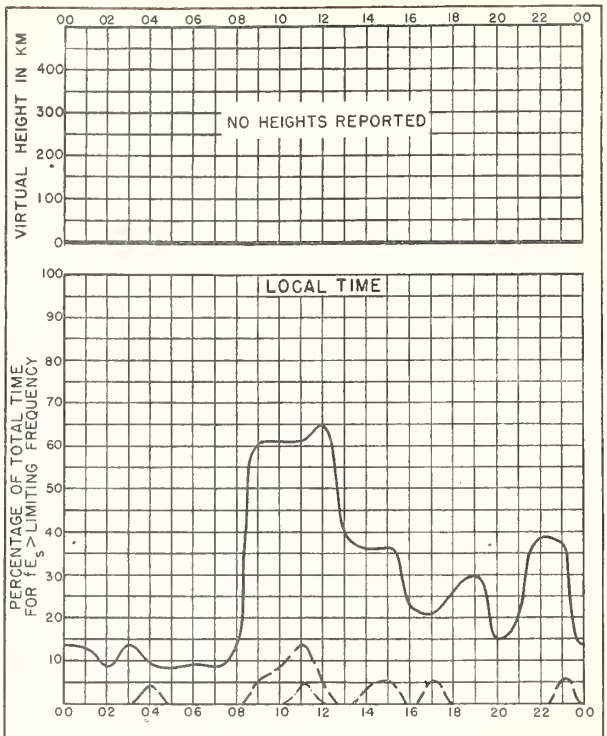

Fig. 65. FALKLAND IS.
JUNE 1946

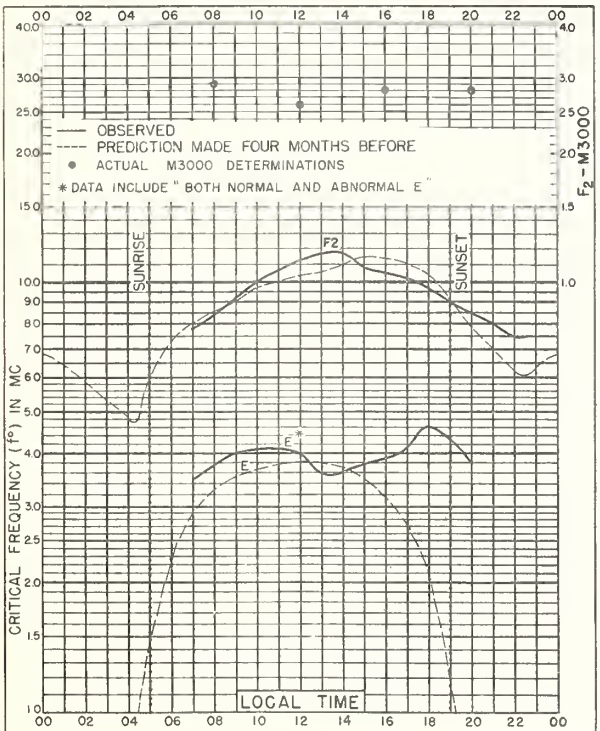

Fig. 66. PESHAWAR, INDIA
34.0°N, 71.5°E
MAY 1946

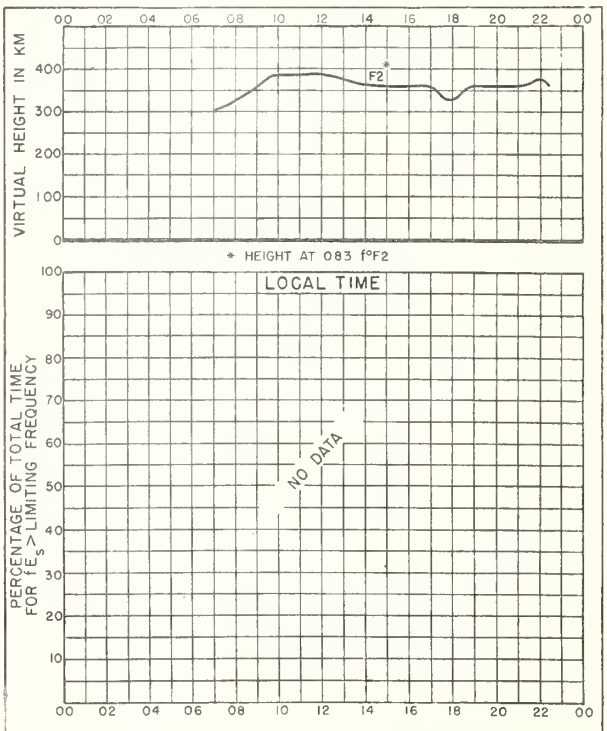

Fig. 67. PESHAWAR, INDIA
MAY 1946

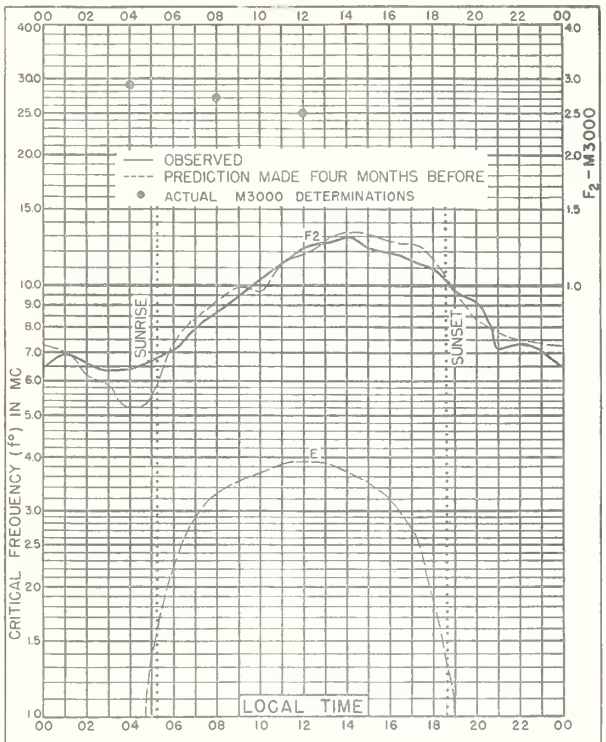

Fig. 68. DELHI, INDIA
28.6°N, 77.1°E
MAY 1946

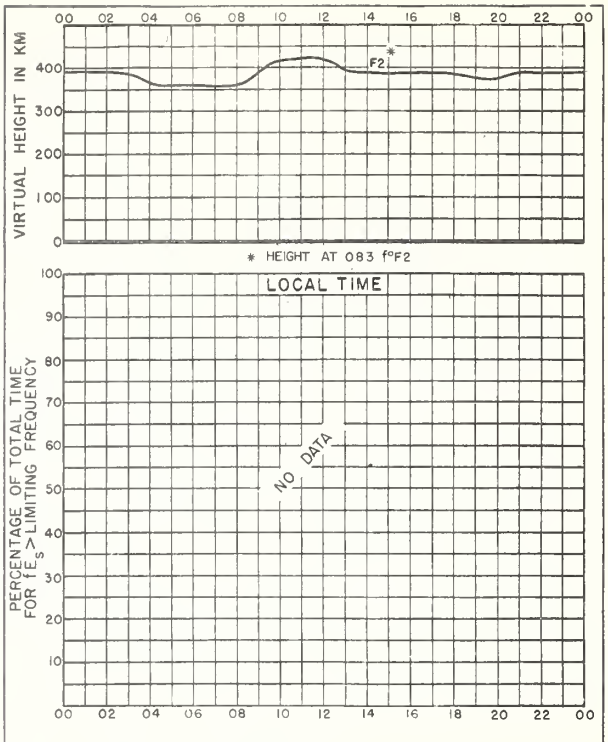

Fig. 69. DELHI, INDIA
MAY 1946

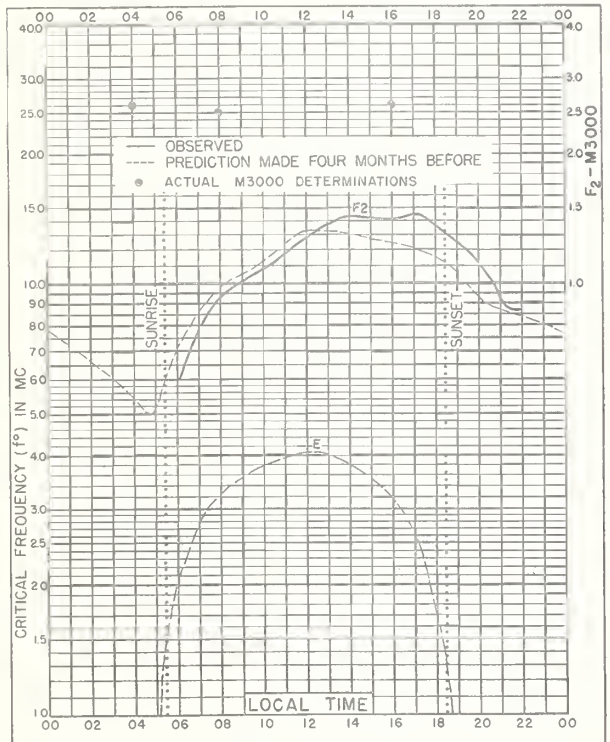

Fig. 70. BOMBAY, INDIA
19.0°N, 73.0°E
MAY 1946

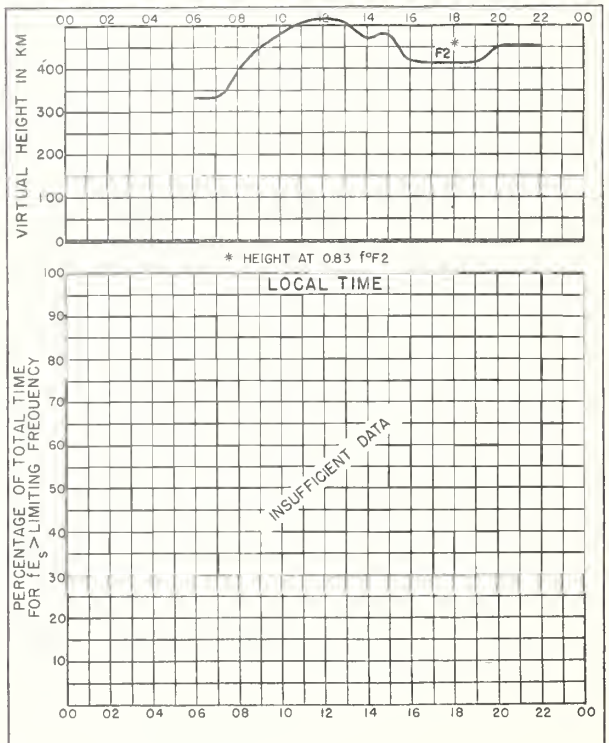

Fig. 71. BOMBAY, INDIA
MAY 1946

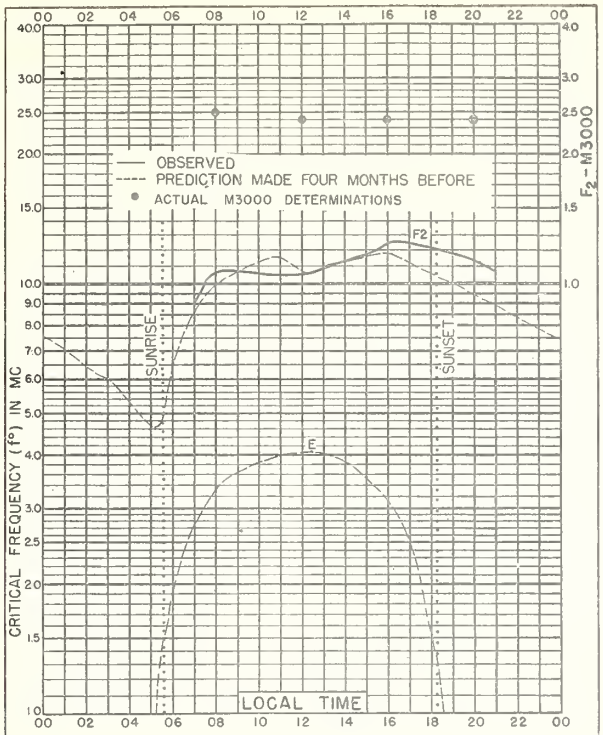

Fig. 72. MADRAS, INDIA
13.0°N, 80.2°E MAY 1946

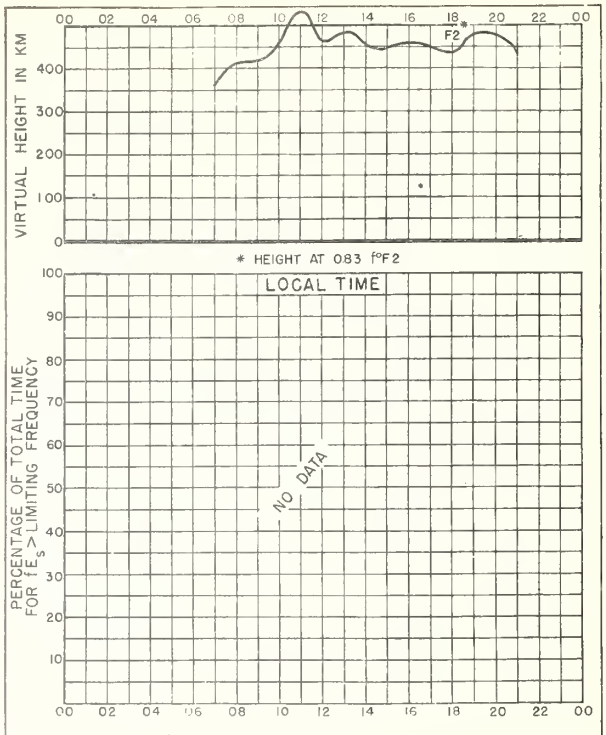

Fig. 73. MADRAS, INDIA MAY 1946

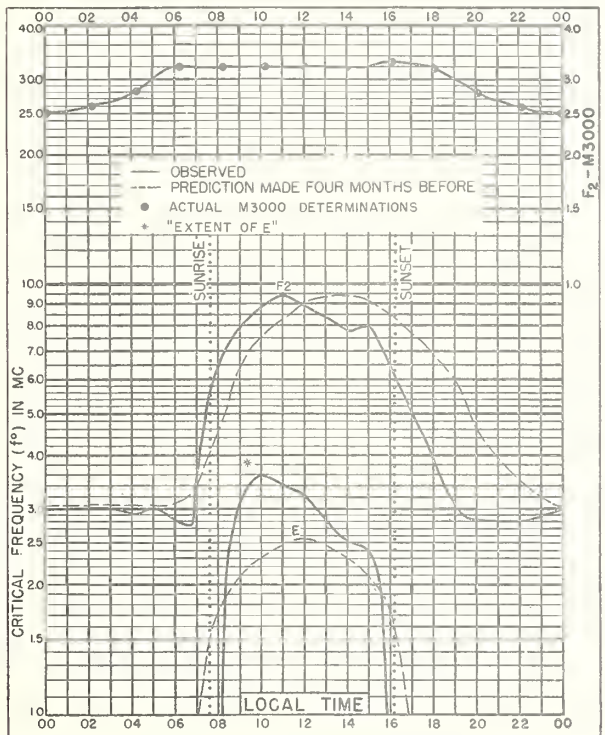

Fig. 74. FALKLAND IS.
51.7°S, 57.7°W MAY 1946

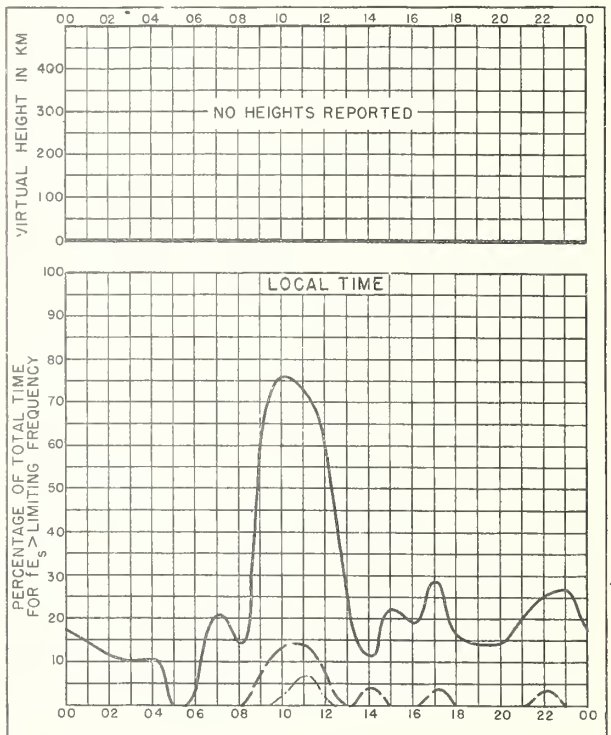

Fig. 75. FALKLAND IS. MAY 1946

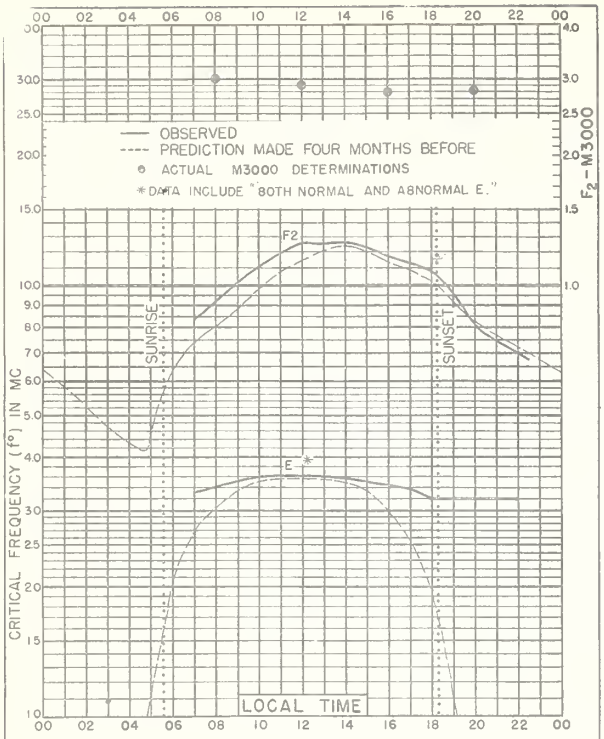

Fig. 76. PESHAWAR, INDIA
34.0°N, 71.5°E APRIL 1946

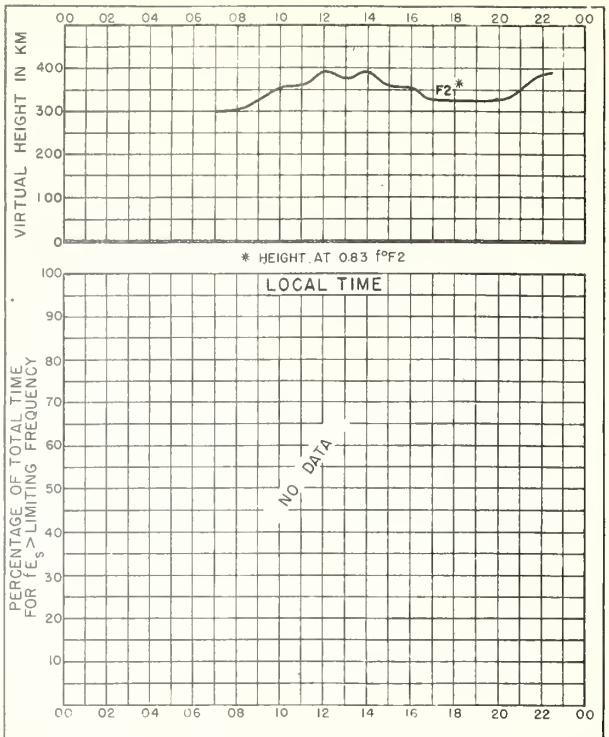

Fig. 77. PESHAWAR, INDIA APRIL 1946

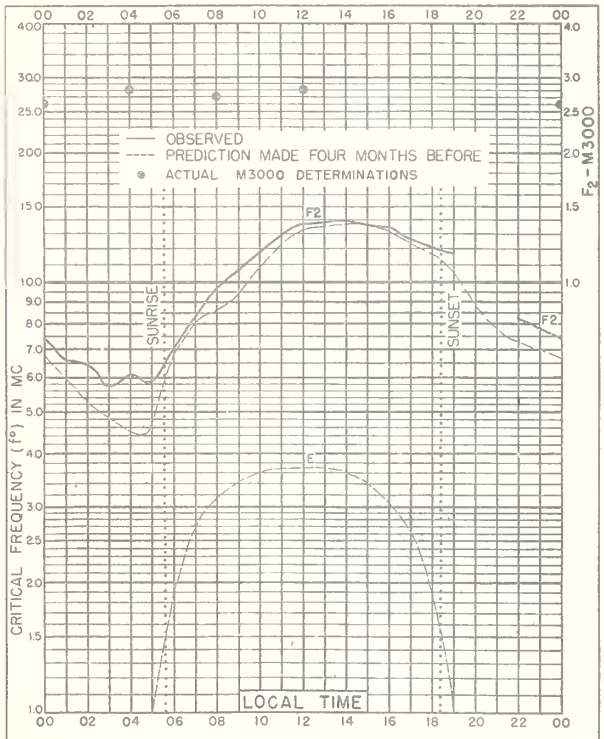

Fig. 78. DELHI, INDIA
28.6°N, 77.1°E APRIL 1946

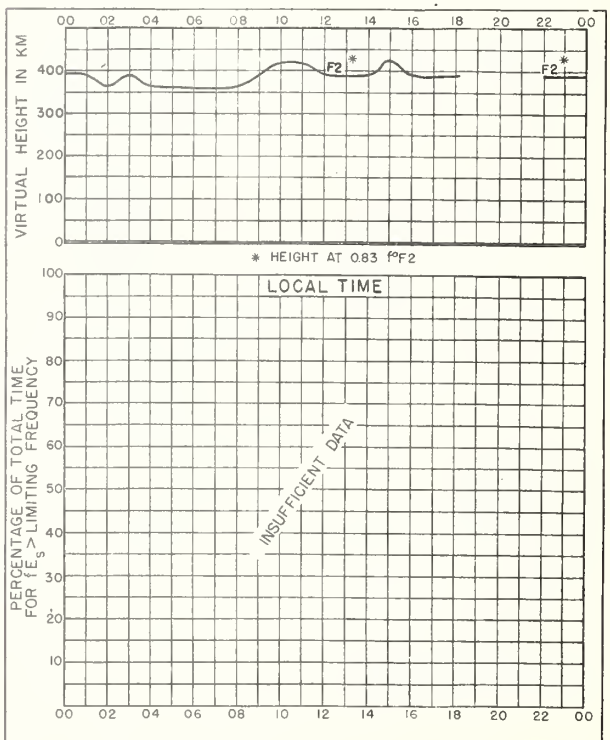

Fig. 79. DELHI, INDIA APRIL 1946

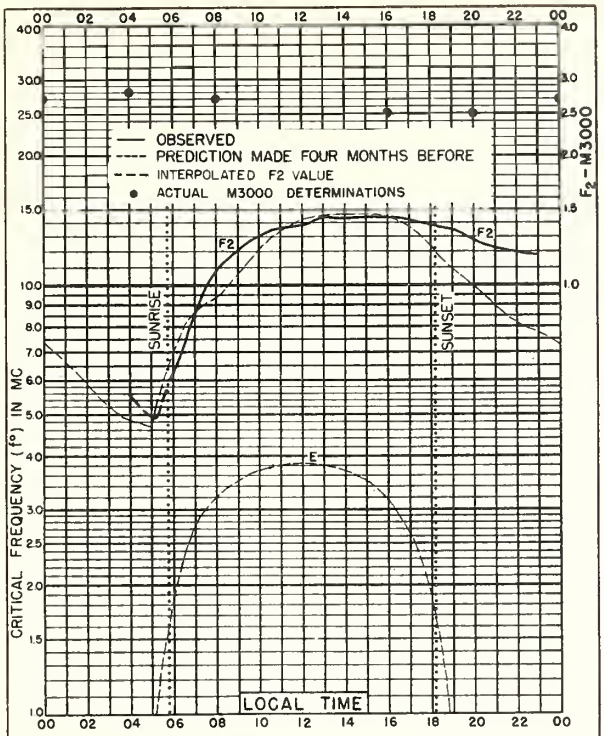

Fig 80. BOMBAY, INDIA
19.0°N, 73.0°E
APRIL 1946

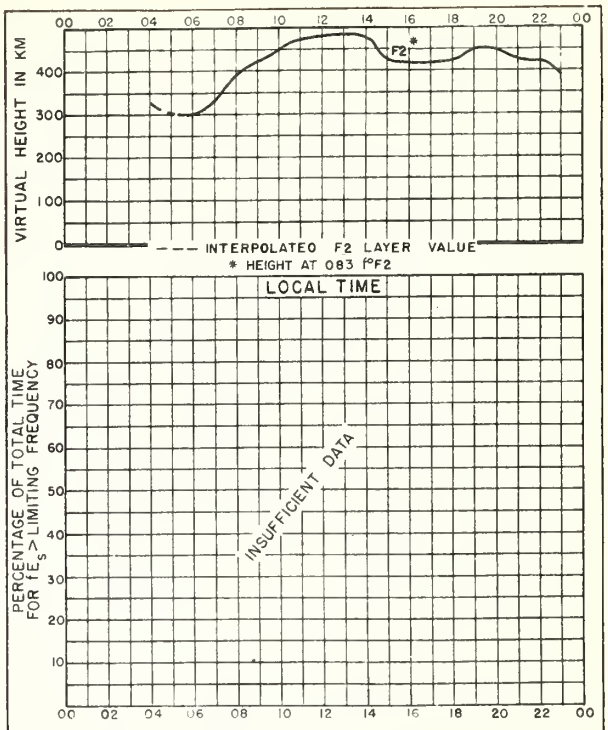

Fig 81. BOMBAY, INDIA
APRIL 1946

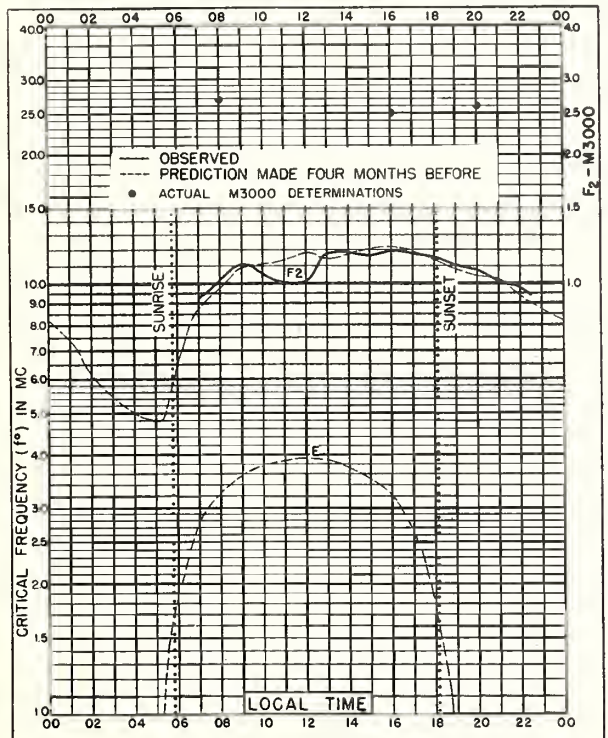

Fig 82. MADRAS, INDIA
13.0°N, 80.2°E
APRIL 1946

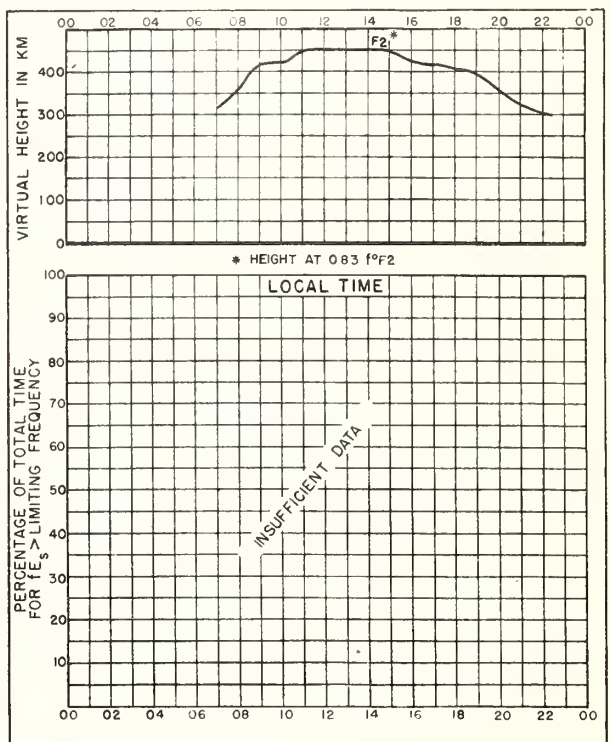

Fig. 83. MADRAS, INDIA
APRIL 1946

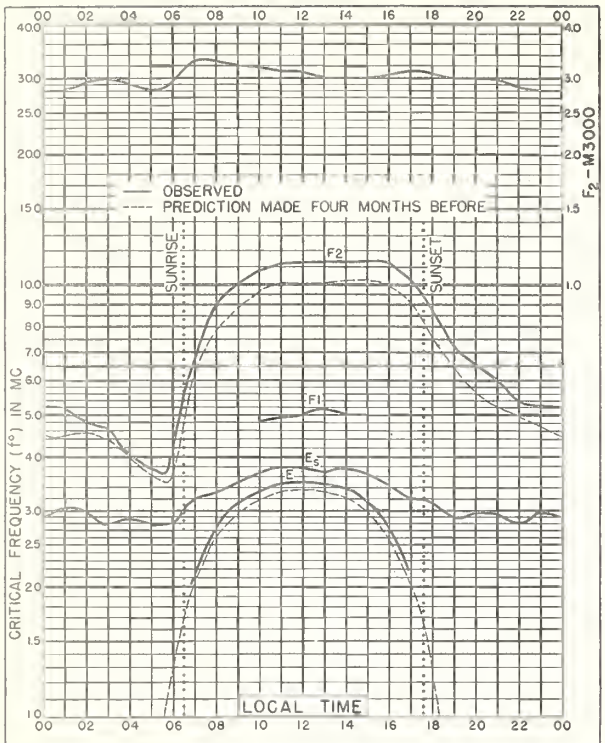

Fig. 84 WATHEROO, W. AUSTRALIA
30.3°S, 115.9°E APRIL 1946

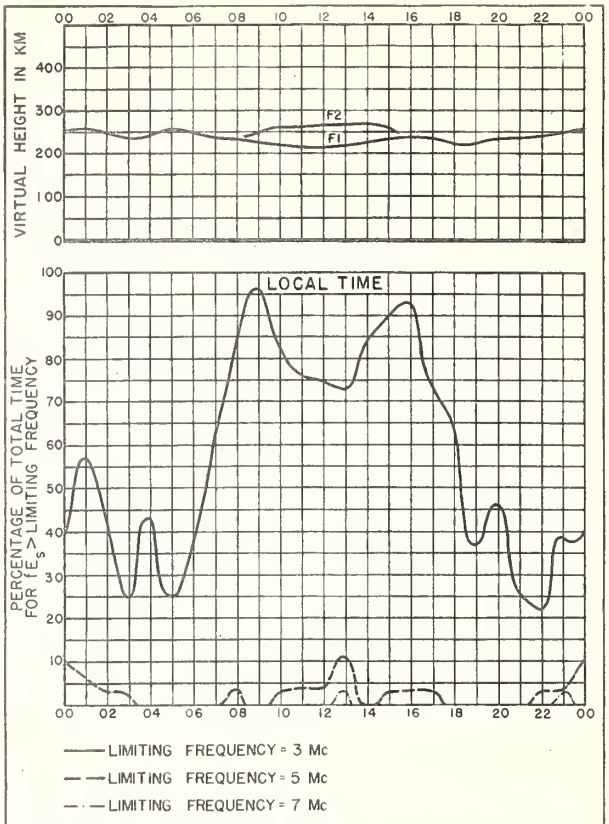

Fig. 85. WATHEROO, W. AUSTRALIA APRIL 1946

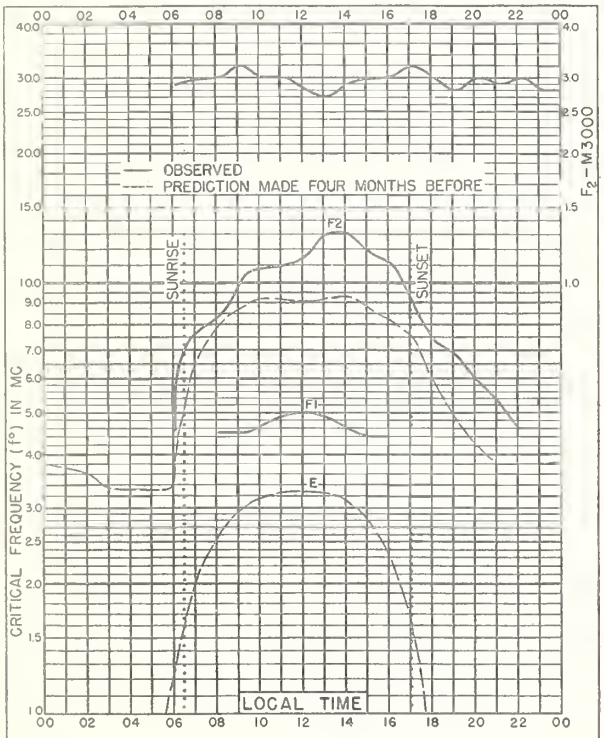

Fig. 86. CHUNGKING, CHINA
29.4°N, 106.8°E NOVEMBER 1945

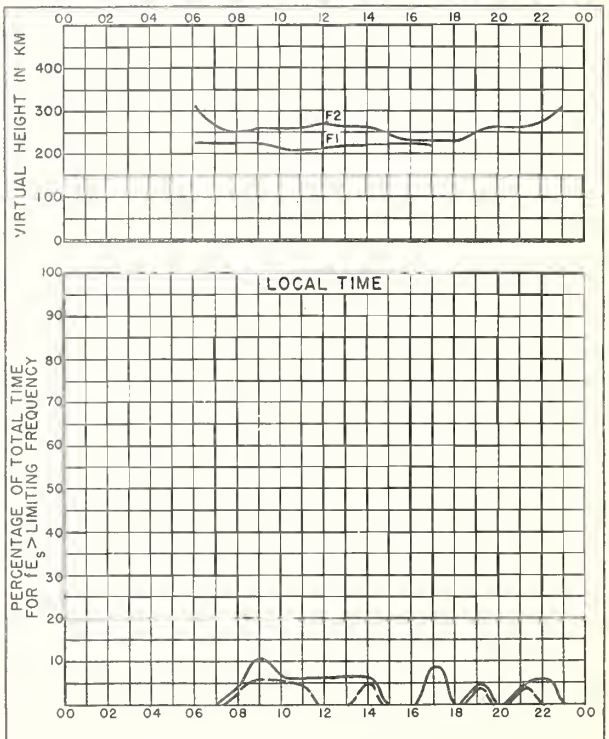

Fig. 87. CHUNGKING, CHINA NOVEMBER 1945

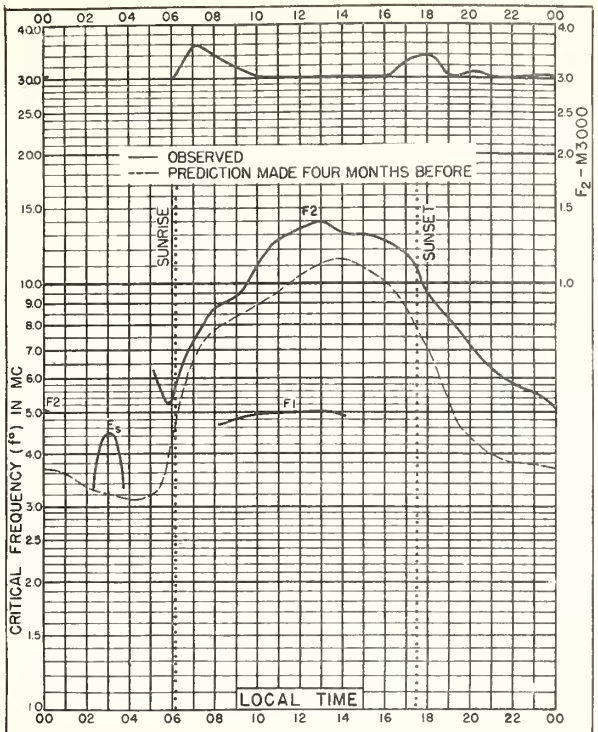

Fig. 88. CHUNGKING, CHINA
29.4°N, 106.8°E OCTOBER 1945

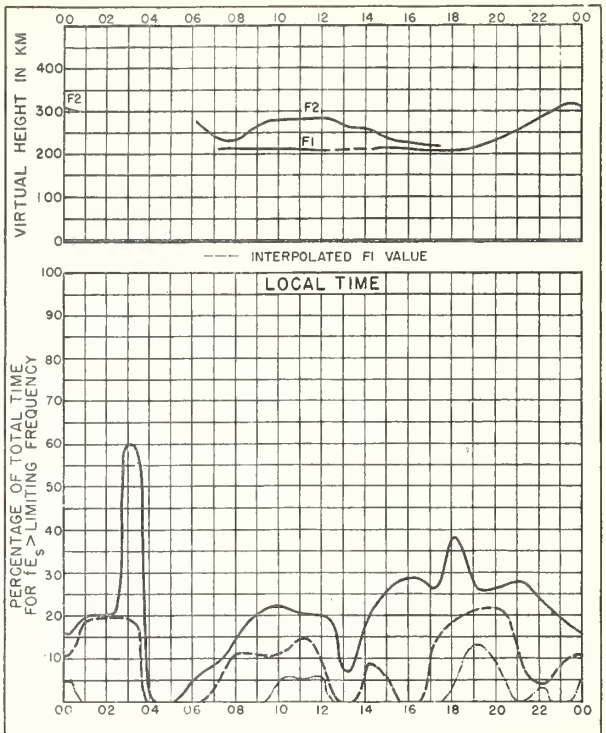

Fig. 89. CHUNGKING, CHINA OCTOBER 1945

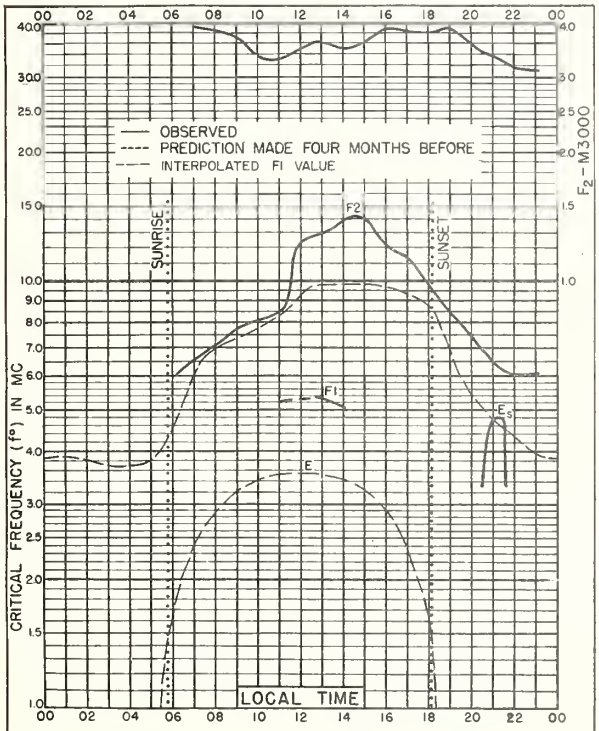

Fig. 90. CHUNGKING, CHINA
29.4°N, 106.8°E SEPTEMBER 1945

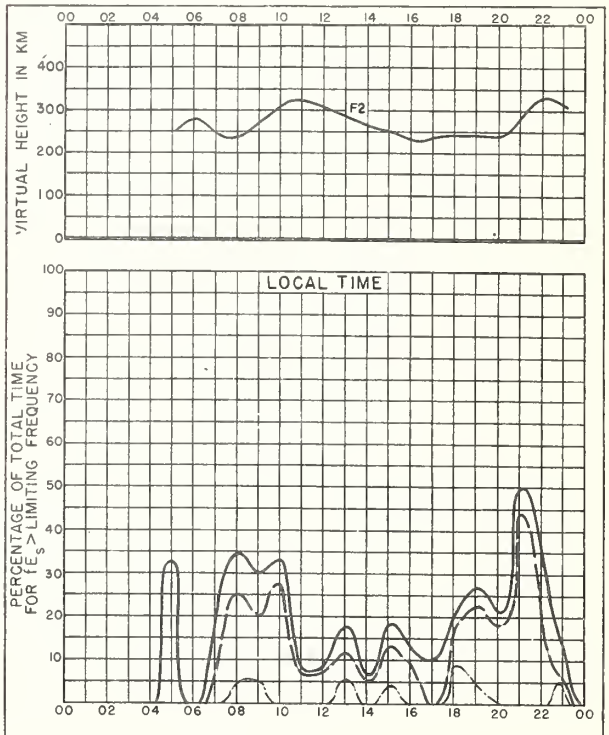

Fig. 91. CHUNGKING, CHINA SEPTEMBER 1945

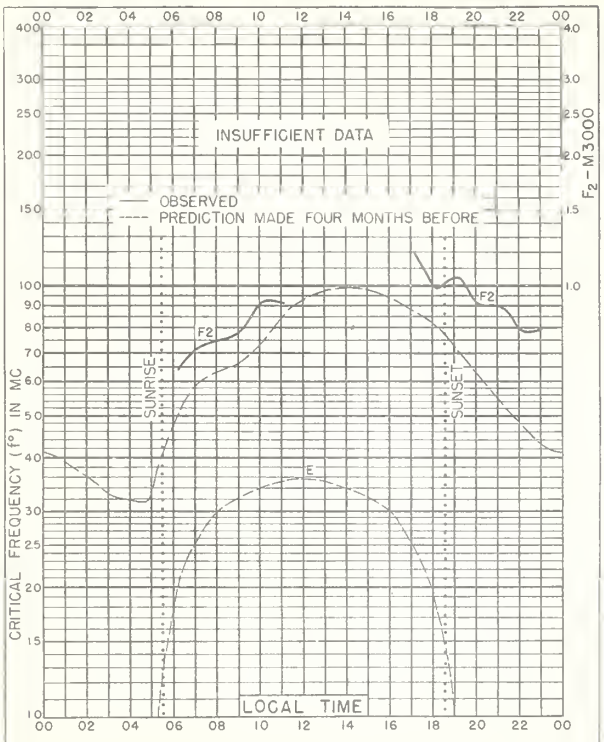

Fig. 92. CHUNGKING, CHINA
29 4°N, 106.8°E AUGUST 1945

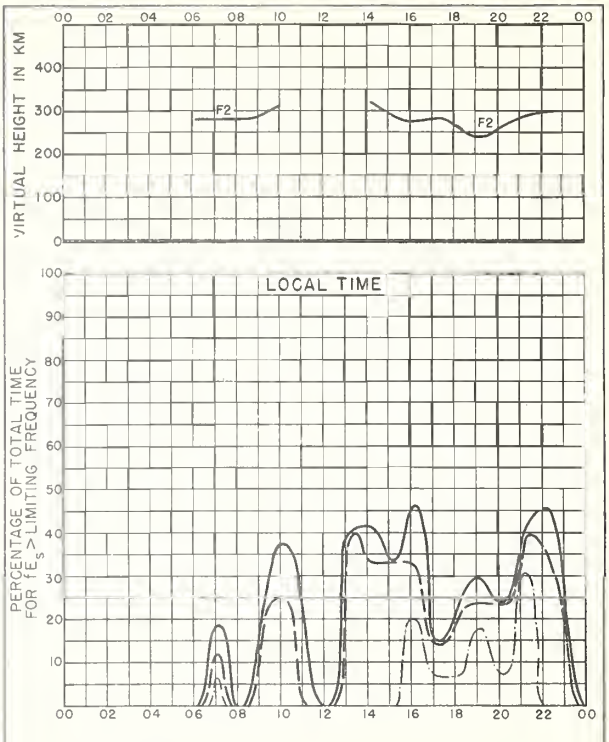

Fig. 93. CHUNGKING, CHINA AUGUST 1945

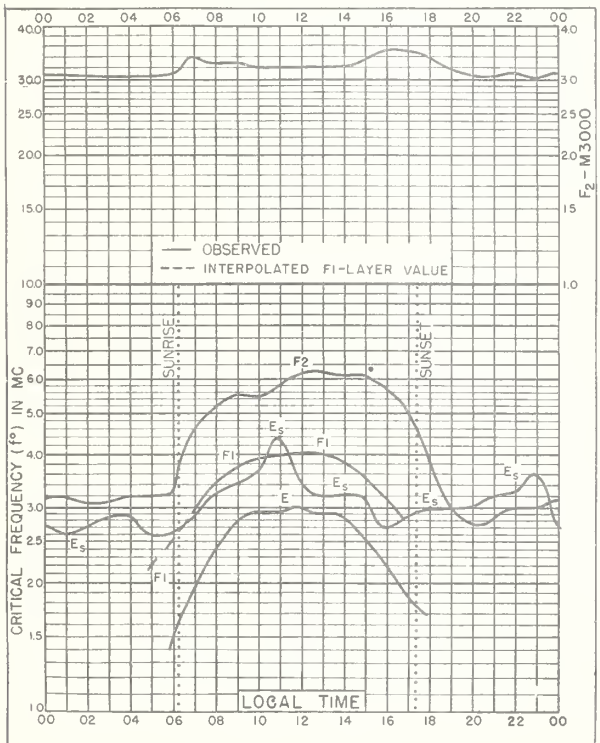

Fig. 94 SAN FRANCISCO, CALIFORNIA
37.4°N, 122.2°W OCTOBER 1943

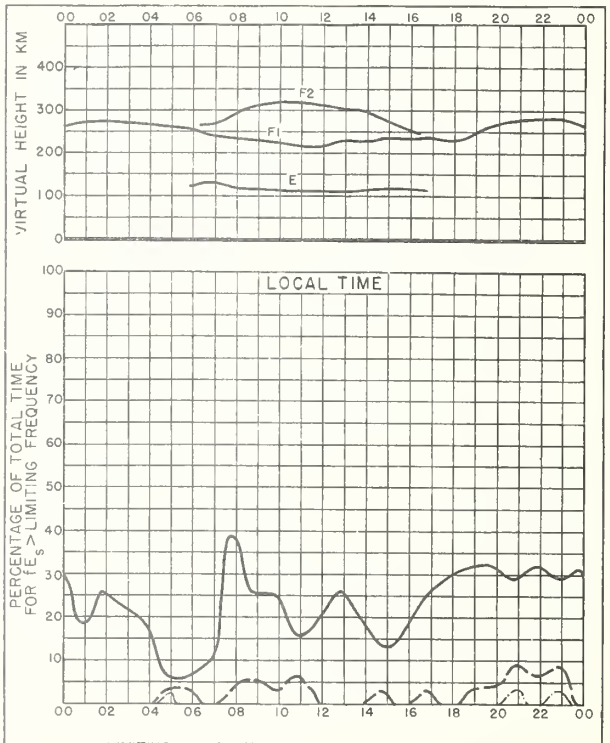

Fig 95. SAN FRANCISCO, CALIFORNIA OCTOBER 1943

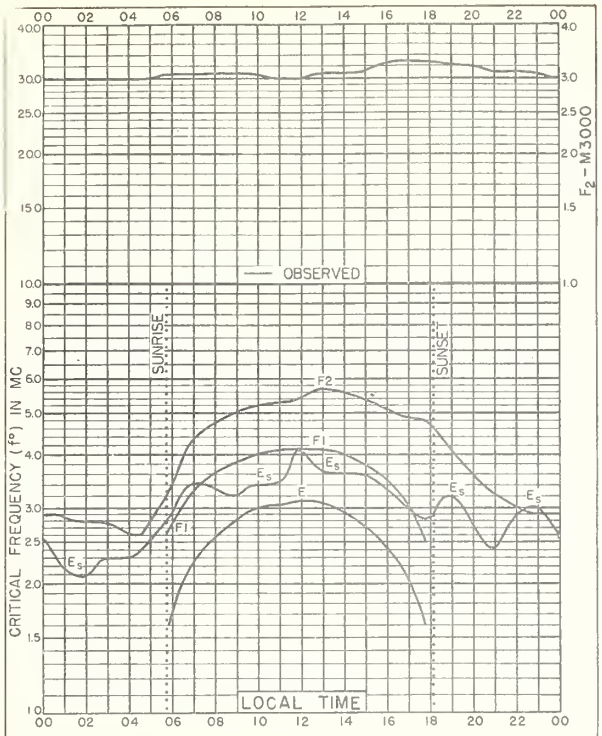

Fig. 96. SAN FRANCISCO, CALIFORNIA
37.4°N, 122.2°W SEPTEMBER 1943

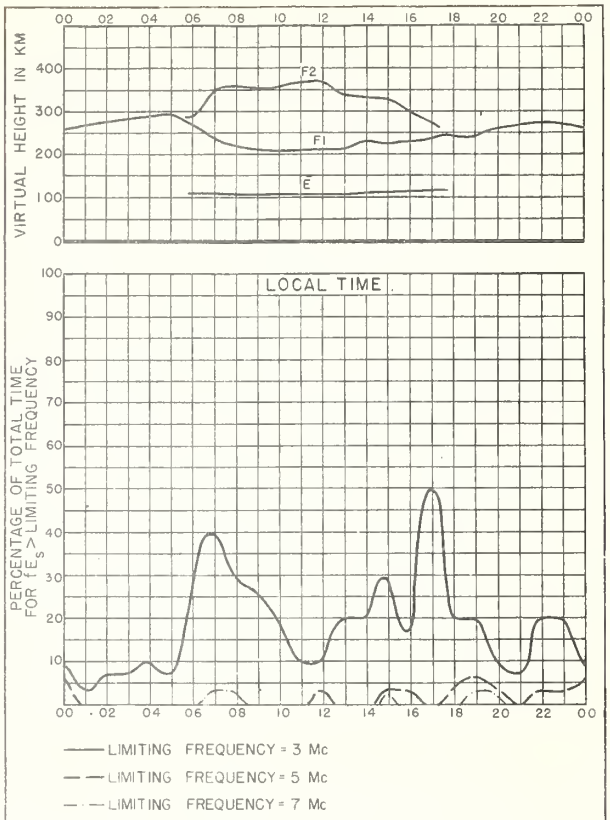

Fig. 97. SAN FRANCISCO, CALIFORNIA SEPTEMBER 1943

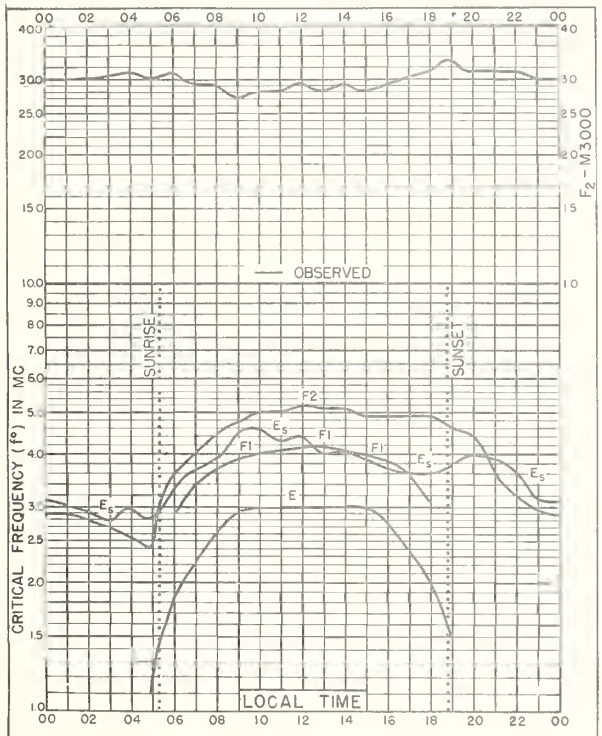

Fig. 98. SAN FRANCISCO, CALIFORNIA
37.4°N, 122.2°W AUGUST 1943

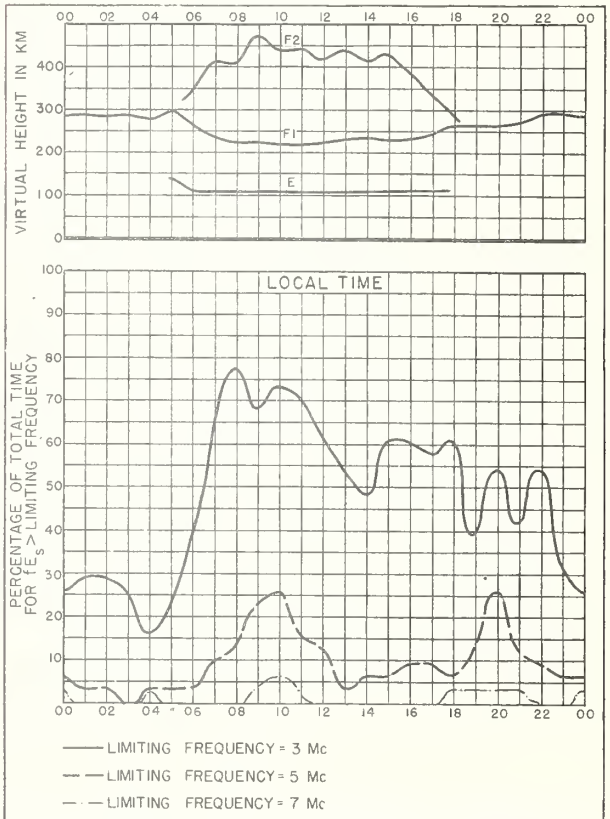

Fig. 99. SAN FRANCISCO, CALIFORNIA AUGUST 1943

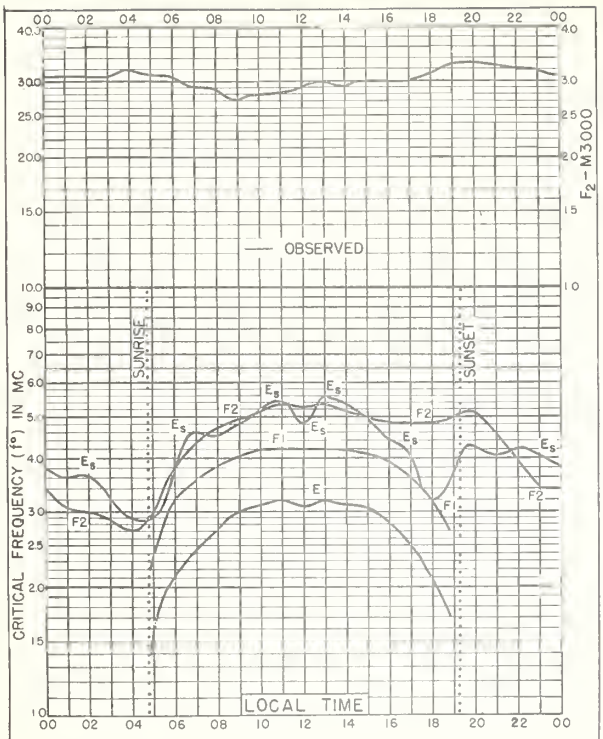

Fig. 100. SAN FRANCISCO, CALIFORNIA
37.4°N, 122.2°W JULY 1943

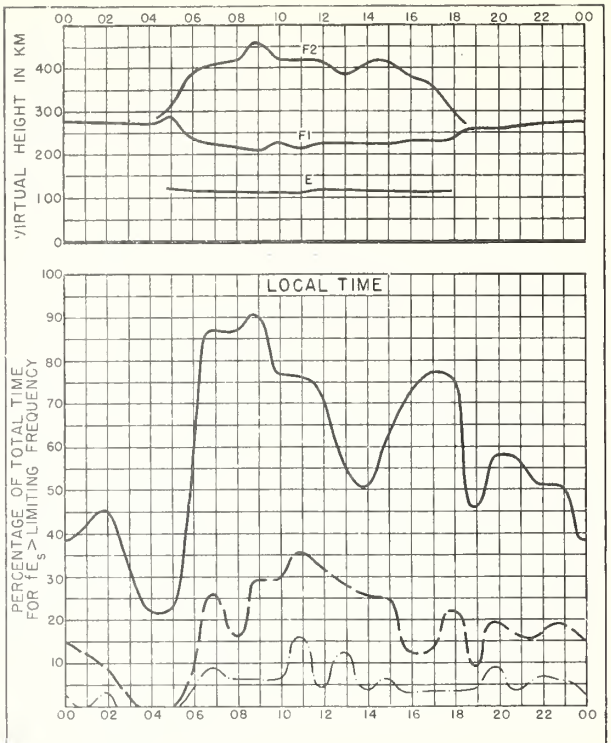

Fig. 101 SAN FRANCISCO, CALIFORNIA JULY 1943

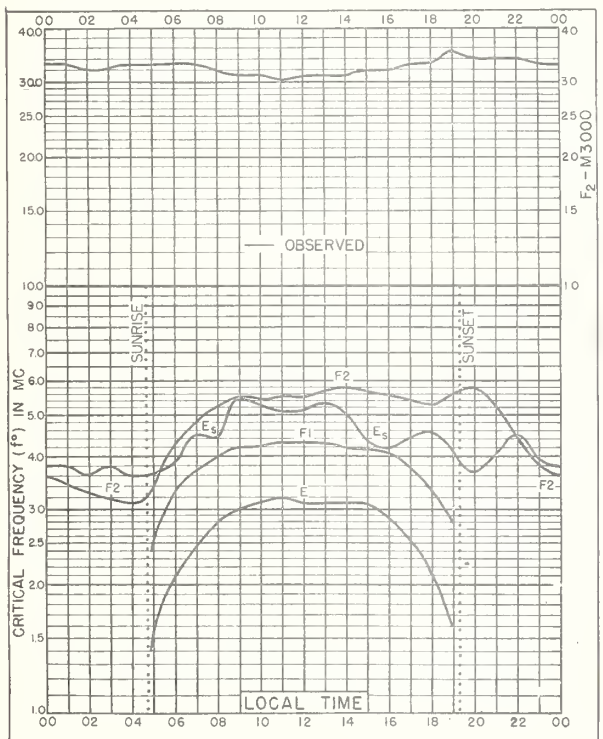

Fig. 102. SAN FRANCISCO, CALIFORNIA
37.4°N, 122.2°W JUNE 1943

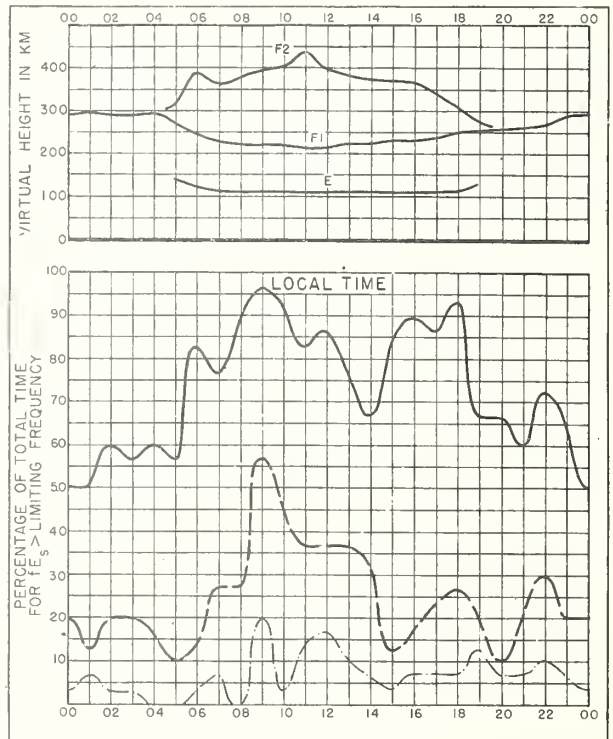

Fig. 103. SAN FRANCISCO, CALIFORNIA JUNE 1943

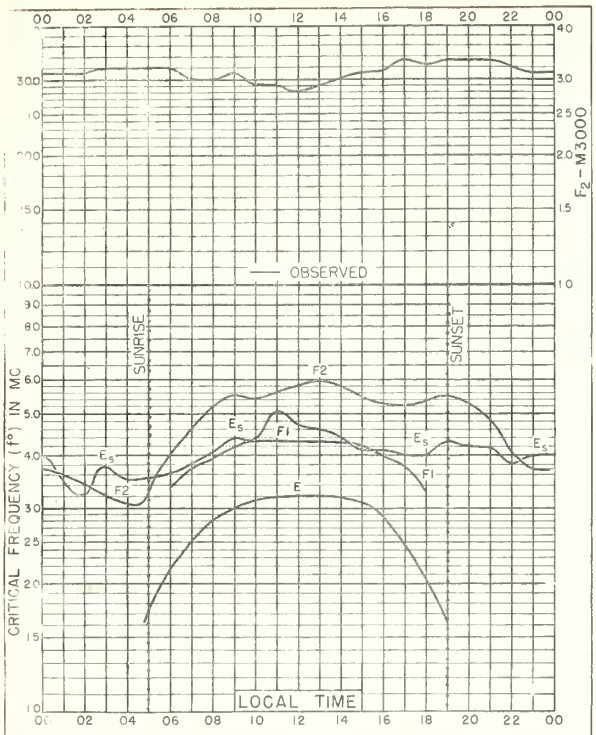

Fig 104. SAN FRANCISCO, CALIFORNIA
37.4°N, 122.2°W MAY 1943

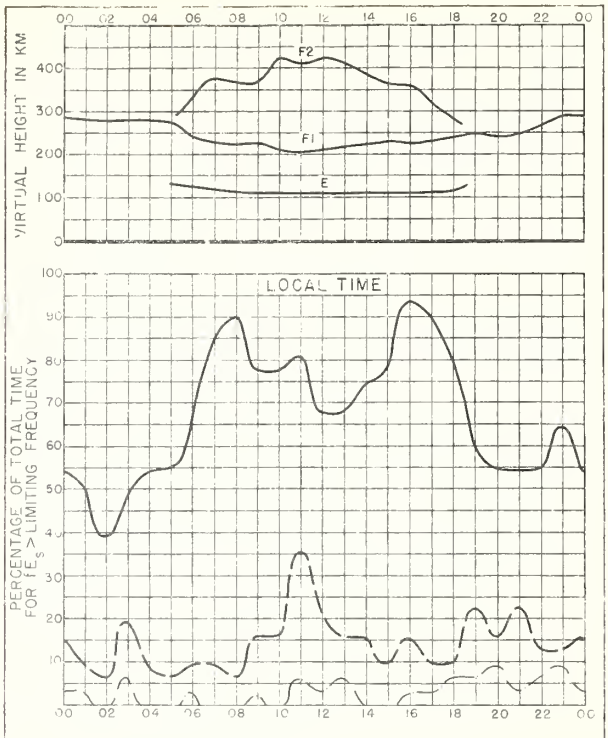

Fig 105. SAN FRANCISCO, CALIFORNIA MAY 1943

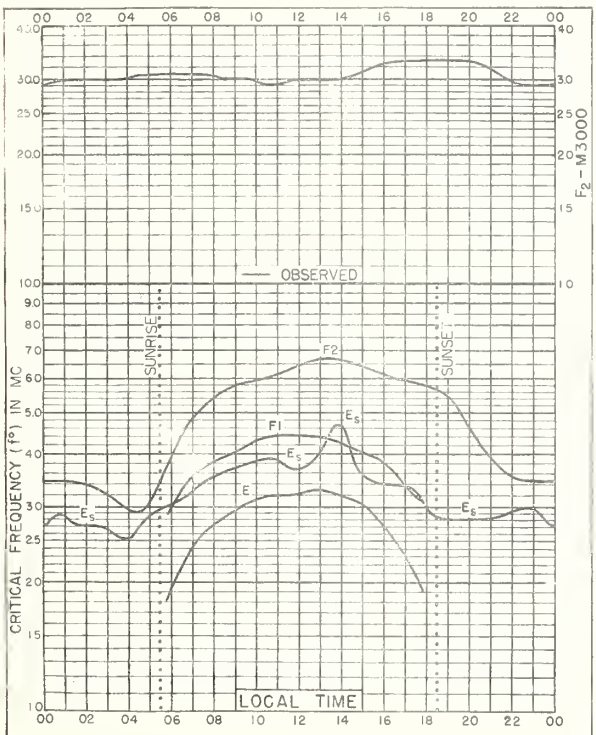

Fig. 106. SAN FRANCISCO, CALIFORNIA
37.4°N, 122.2°W APRIL 1943

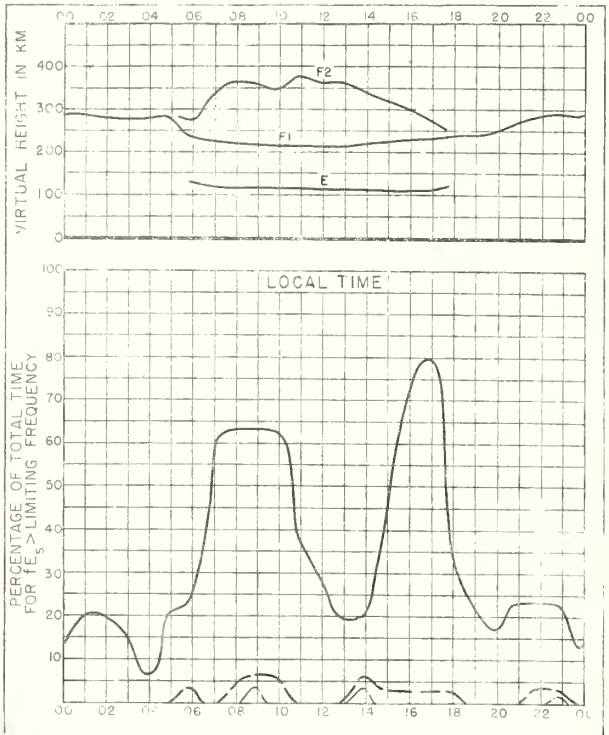

Fig 107. SAN FRANCISCO, CALIFORNIA APRIL 1943

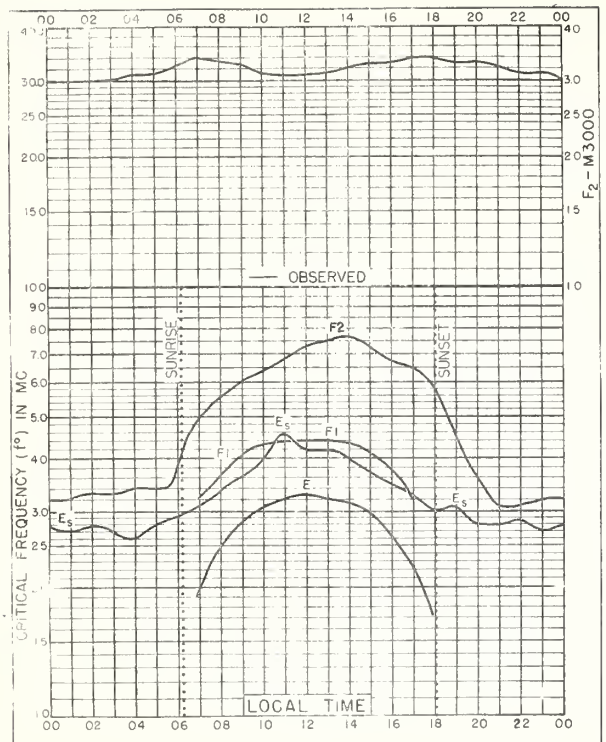

Fig 108 SAN FRANCISCO, CALIFORNIA
374°N, 122 2°W MARCH 1943

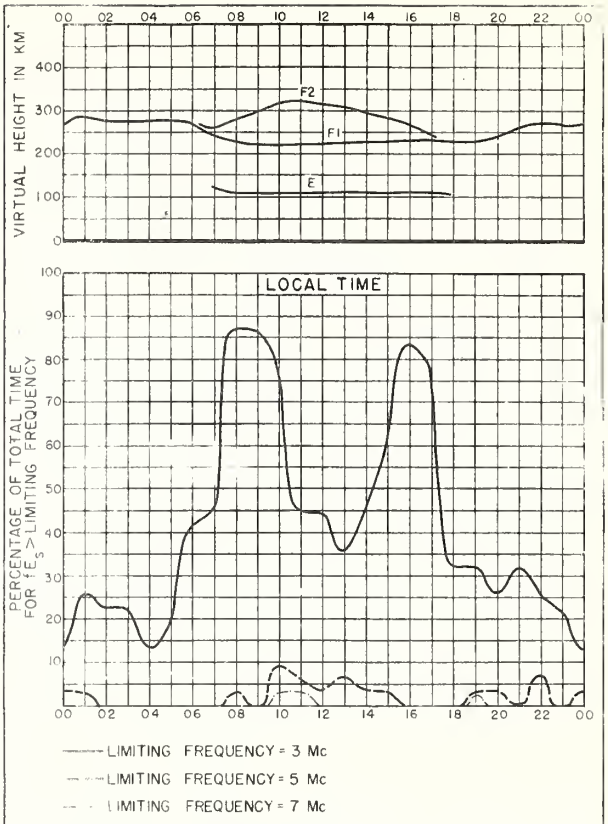

Fig 109 SAN FRANCISCO, CALIFORNIA MARCH 1943

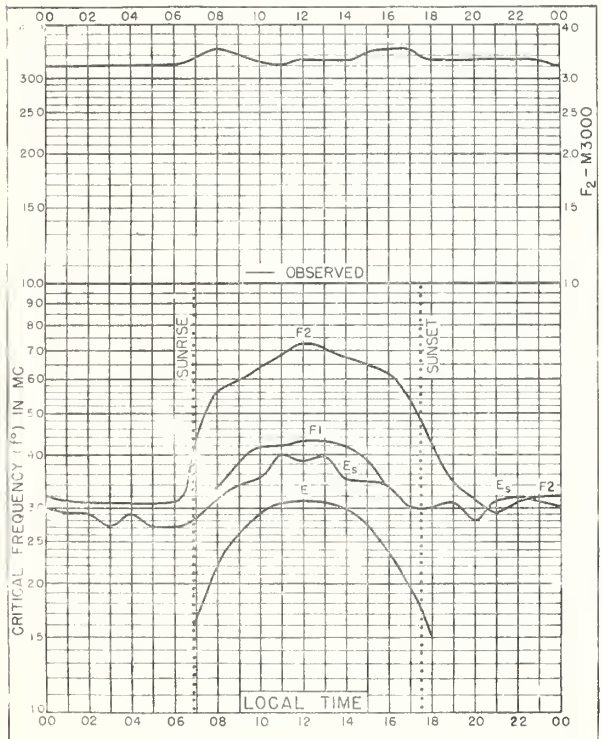

Fig 110 SAN FRANCISCO, CALIFORNIA
374°N, 122 2°W FEBRUARY 1943

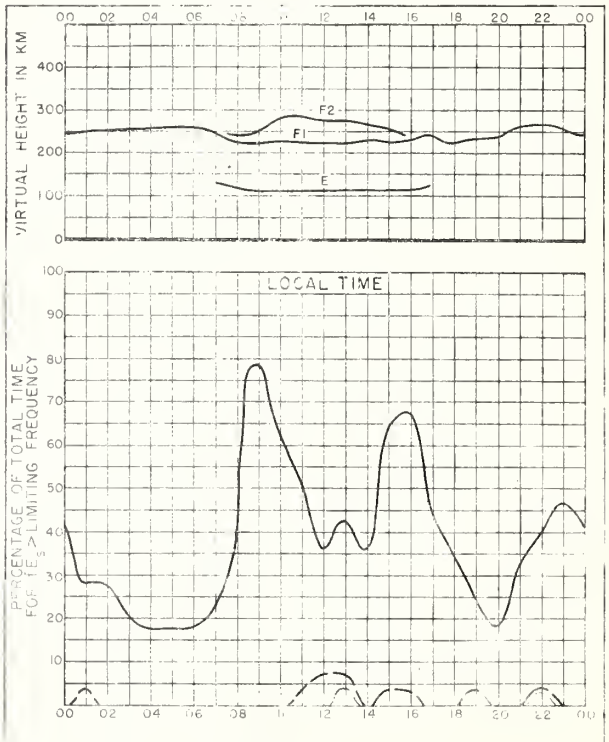

Fig. 111 SAN FRANCISCO, CALIFORNIA FEBRUARY 1943

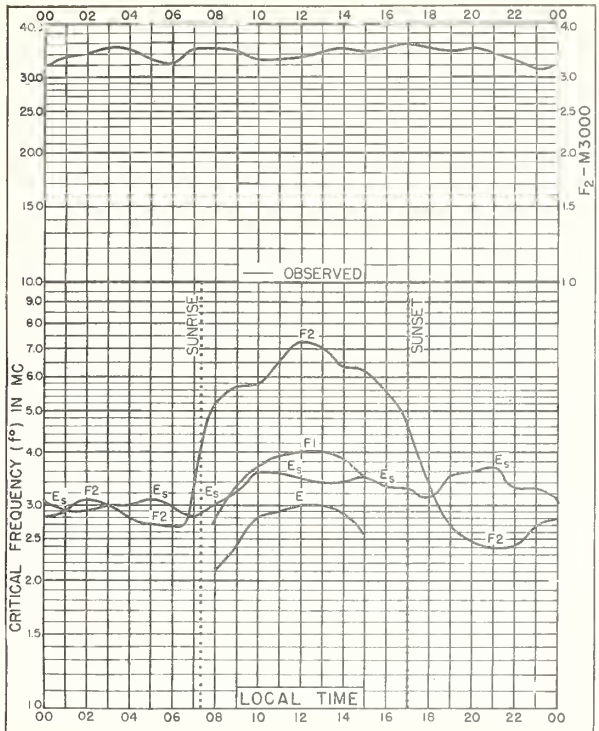

Fig. 112. SAN FRANCISCO, CALIFORNIA
37.4°N, 122.2°W JANUARY 1943

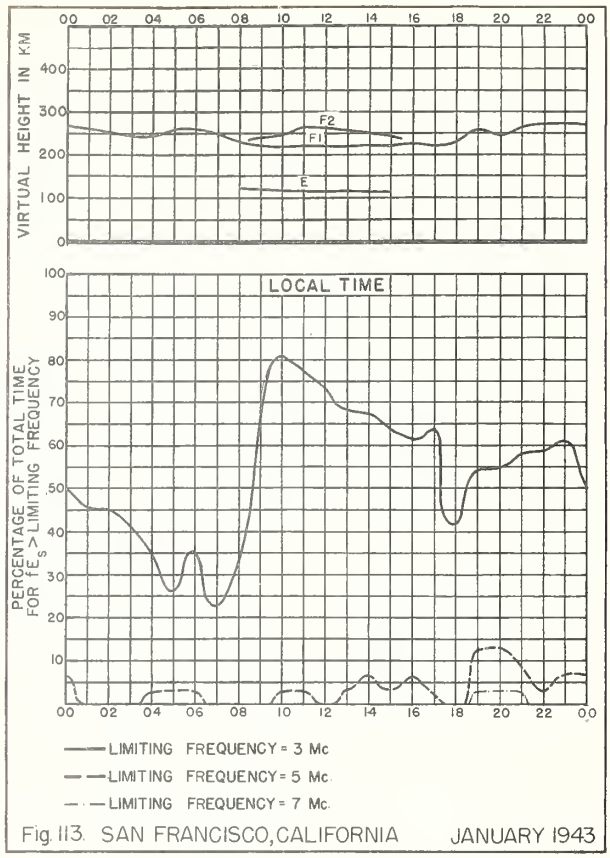

Fig. 113. SAN FRANCISCO, CALIFORNIA JANUARY 1943

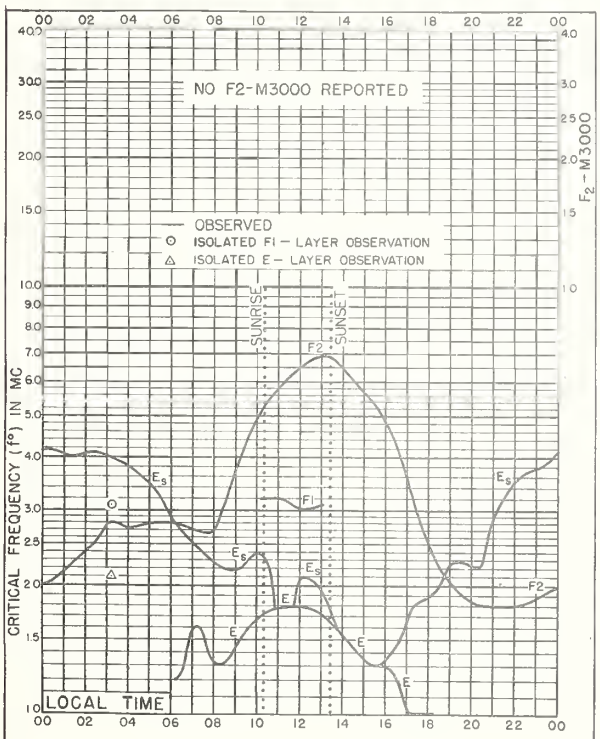

Fig. 114. FAIRBANKS, ALASKA
64.9°N, 147.8°W DECEMBER 1941

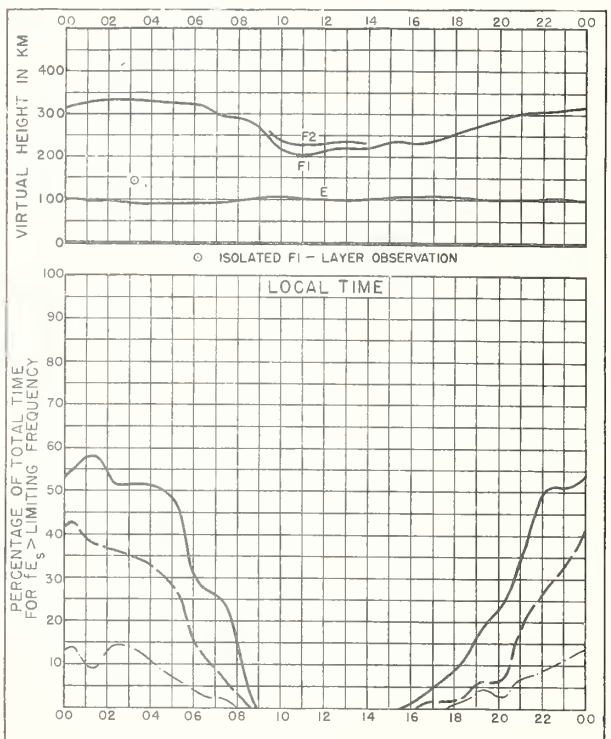

Fig. 115. FAIRBANKS, ALASKA DECEMBER 1941

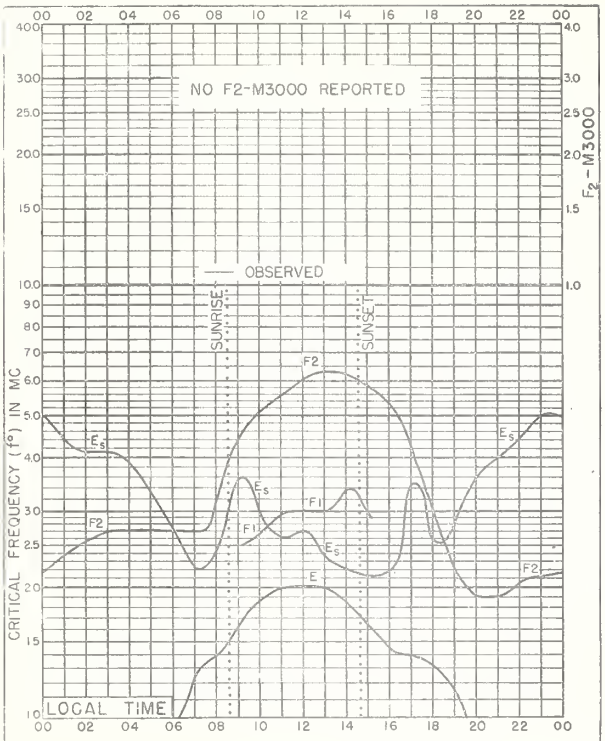

Fig. 116. FAIRBANKS, ALASKA
64.9°N, 147.8°W NOVEMBER 1941

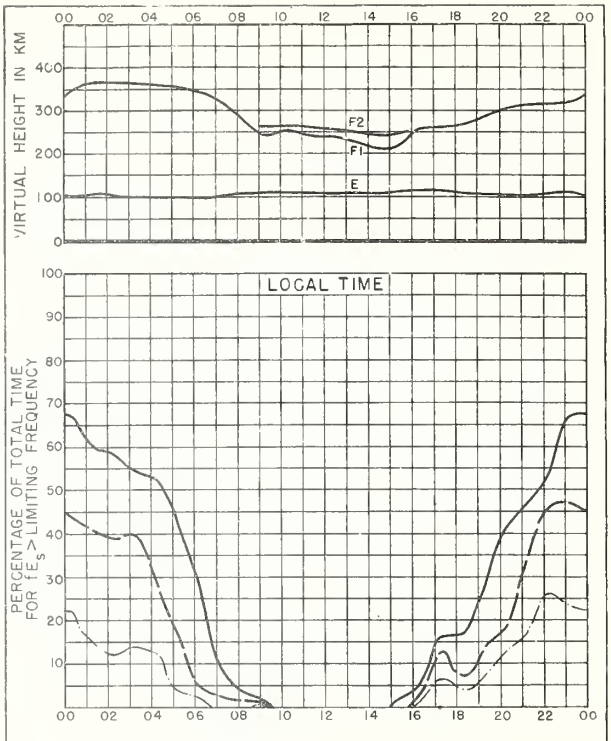

Fig. 117. FAIRBANKS, ALASKA NOVEMBER 1941

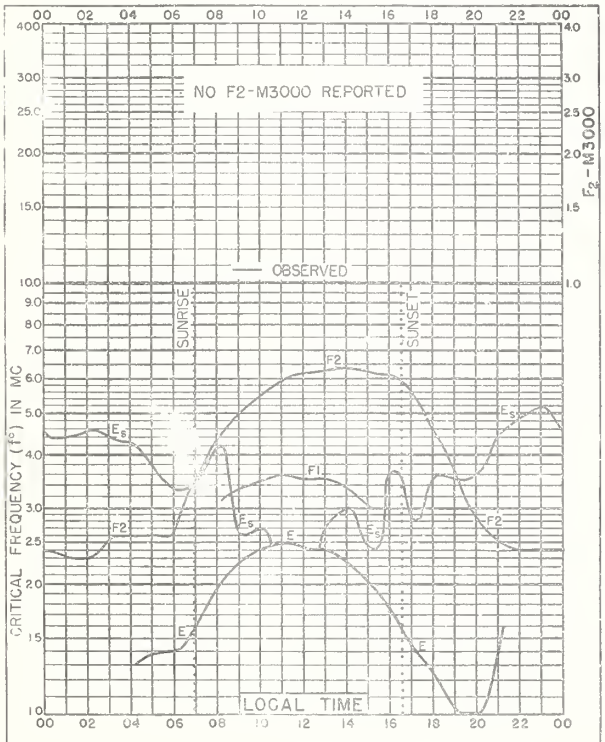

Fig. 118. FAIRBANKS, ALASKA
64.9°N, 147.8°W OCTOBER 1941

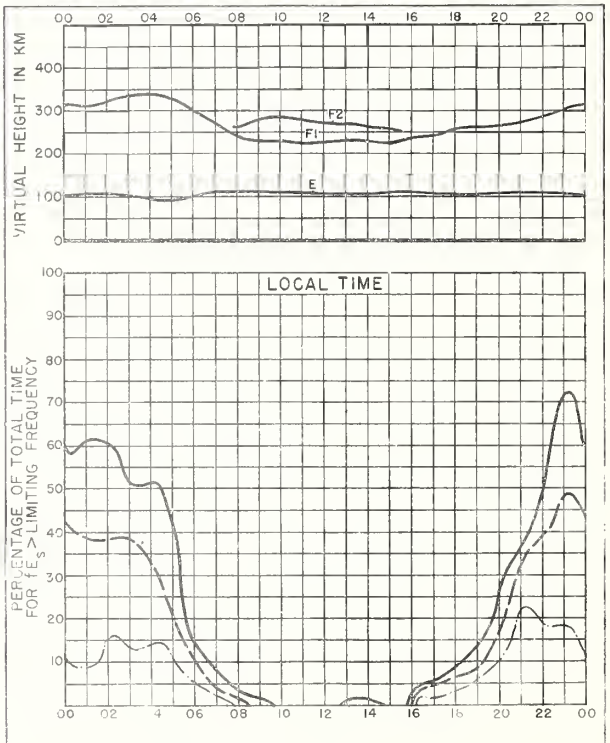

Fig. 119. FAIRBANKS, ALASKA OCTOBER 1941

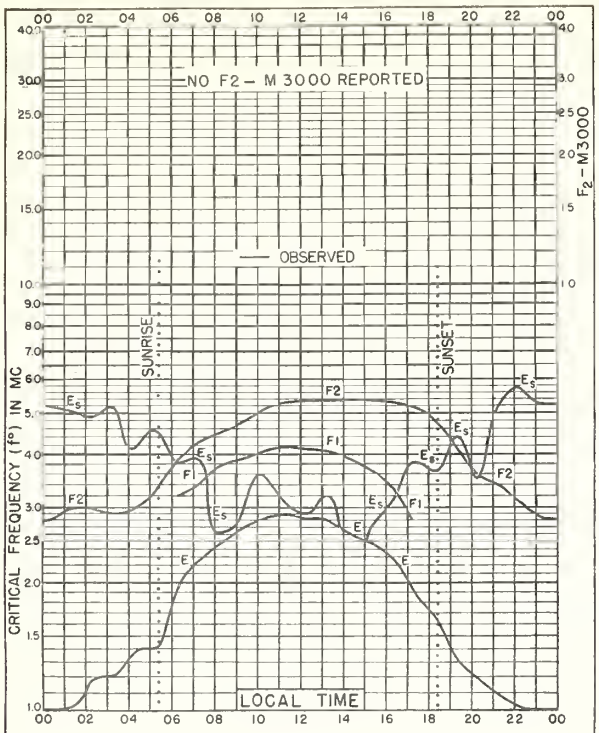

Fig. 120. FAIRBANKS, ALASKA
64.9°N, 147.8°W SEPTEMBER 1941

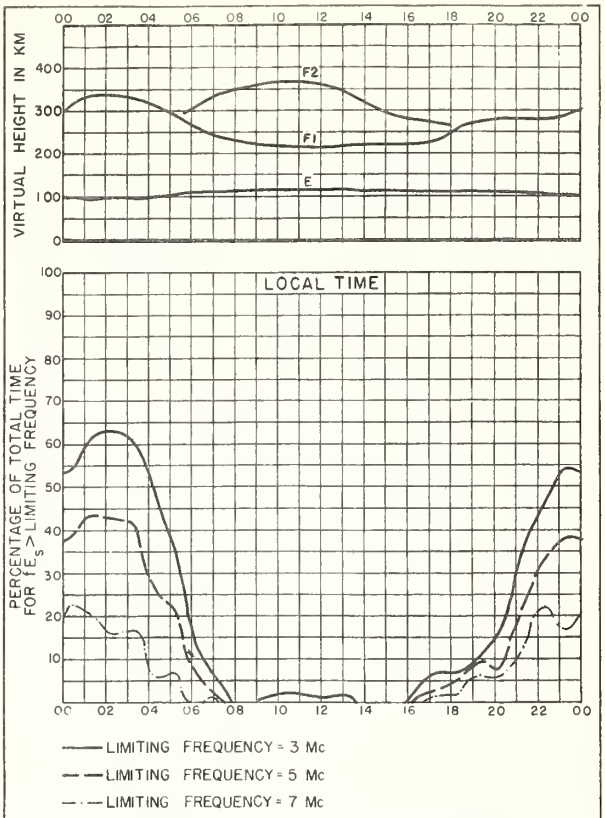

Fig. 121. FAIRBANKS, ALASKA SEPTEMBER 1941

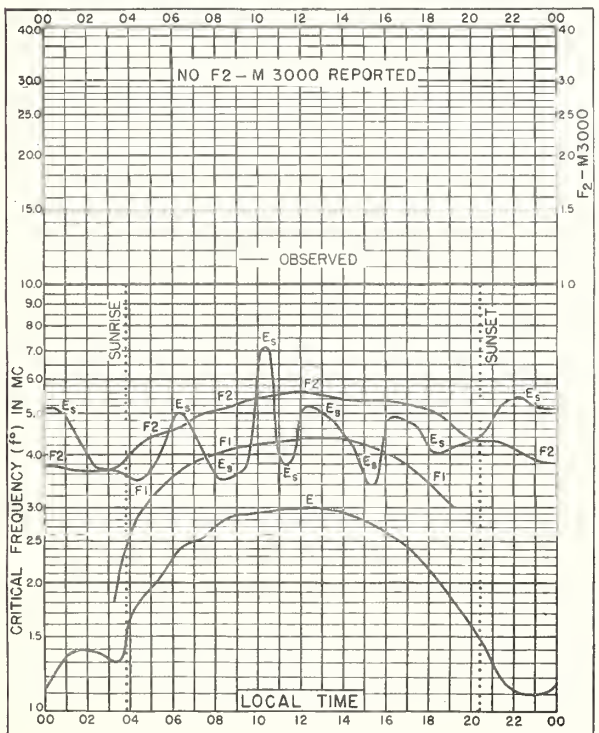

Fig. 122. FAIRBANKS, ALASKA
64.9°N, 147.8°W AUGUST 1941

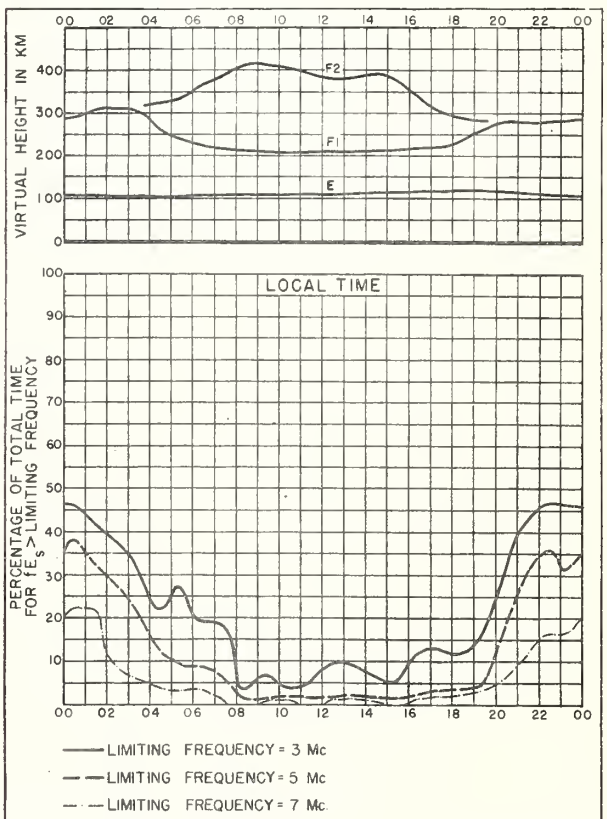

Fig. 123. FAIRBANKS, ALASKA AUGUST 1941

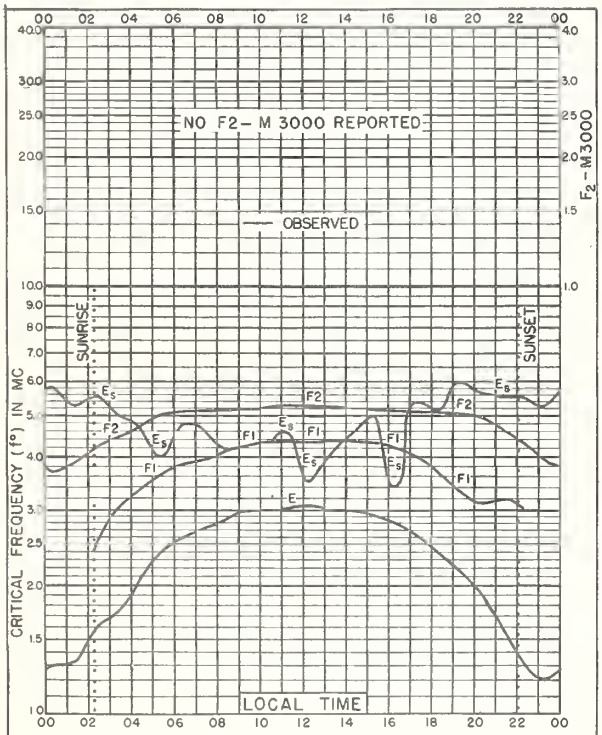

Fig. 124. FAIRBANKS, ALASKA
64.9°N, 147.8°W JULY 1941

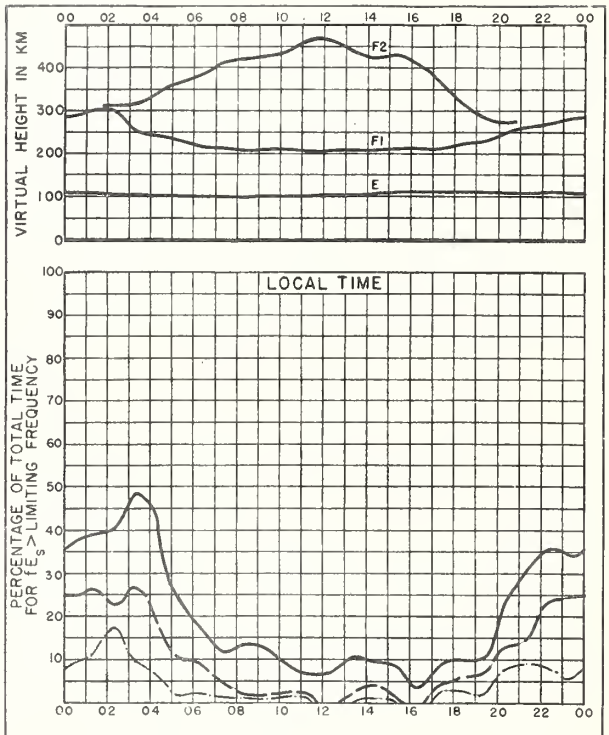

Fig. 125. FAIRBANKS, ALASKA JULY 1941

INDEX FOR CRPL-F27

CRPL and IRPL REPORTS

Daily:

Radio disturbance warnings, every half hour from broadcast station WWV of the National Bureau of Standards. Telephoned and telegraphed reports of ionospheric, solar, geomagnetic and radio propagation data.

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CRPL–F. Ionospheric Data.

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IRPL–G1 through G12. Correlation of D. F. Errors With Ionospheric Conditions.

IRPL–R. Unscheduled reports:

- R4. Methods Used by IRPL for the Prediction of Ionosphere Characteristics and Maximum Usable Frequencies.
- R5. Criteria for Ionospheric Storminess.
- R6. Experimental Studies of Ionospheric Propagation as Applied to the Loran System.
- R7. Second Report on Experimental Studies of Ionospheric Propagation as Applied to the Loran System.
- R8. The Prediction of Usable Frequencies Over a Path of Short or Medium Length, Including the Effects of *Es*.
- R9. An Automatic Instantaneous Indicator of Skip Distance and MUF.
- R10. A Proposal for the Use of Rockets for the Study of the Ionosphere.
- R11. A Nomographic Method for Both Prediction and Observation Correlation of Ionosphere Characteristics.
- R12. Short Time Variations in Ionospheric Characteristics.
- R13. Ionospheric and Radio Propagation Disturbances, October 1943 Through February 1945.
- R14. A Graphical Method for Calculating Ground Reflection Coefficients.
- R15. Predicted Limits for *F*2-layer Radio Transmisson Throughout the Solar Cycle.
- R16. Predicted *F*2-layer Frequencies Throughout the Solar Cycle, for Summer, Winter, and Equinox Season.
- R17. Japanese Ionospheric Data—1943.
- R18. Comparison of Geomagnctic Records and North Atlantic Radio Propagation Quality Figures—October 1943 Through May 1945.
- R19. Nomographic Predictions of *F*2-layer Frequencies Throughout the Solar Cycle, for June.
- R20. Nomographic Predictions of *F*2-layer Frequencies Throughout the Solar Cycle, for September.
- R21. Notes on the Preparation of Skip-Distance and MUF Charts for Use by Direction-Finder Stations. (For distances out to 4000 km.)
- R22. Nomographic Predictions of *F*2-layer Frequencies Throughout the Solar Cycle, for December.
- R23. Solar-Cycle Data for Correlation With Radio Propagation Phenomena.
- R24. Relations Between Band Width, Pulse Shape and Usefulness of Pulses in the Loran System.
- R25. The Prediction of Solar Activity as a Basis for Predictions of Radio Propagation Phenomena.
- R26. The Ionosphere as a Measure of Solar Activity.
- R27. Relationships Between Radio Propagation Disturbance and Central Meridian Passage of Sunspots Grouped by Distance From Center of Disc.
- R28. Nomographic Predictions of *F*2-Layer Frequencies Throughout the Solar Cycle for January.
- R29 and 29–A. Revised Classification of Radio Subjects Used in National Bureau of Standards and First Supplement (N. B. S. Letter Circular LC–814 and supplement, superseding circular C385).
- R30. Disturbance Rating in Values of IRPL Quality—Figure Scale From A. T. & T. Co. Transmission Disturbance Reports to Replace T. D. Figures as Reported.
- R31. North Atlantic Radio Propagation Disturbances, October 1943 Through October 1945.
- R32. Nomographic Predictions of *F*2-Layer Frequencies Throughout the Solar Cycle, for February.
- R33. Ionospheric Data on File at IRPL.
- R34. The Interpretation of Recorded Values of *fEs*.
- R35. Comparison of Percentage of Total Time of Second-Multiple *Es* Reflections and That of *fEs* in Excess of 3 Mc.

IRPL–T. Reports on Tropospheric Propagation.

- T1. Radar Operation and Weather. (Superseded by JANP 101.)
- T2. Radar Coverage and Weather. (Superseded by JANP 102.)

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